

**NOTES**

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**SLOPE STABILIZATION NOTES**

ALL SLOPES WITH A GRADIENT OF GREATER THAN 3:1 SHALL BE STABILIZED WITH ONE OF THE FOLLOWING METHODS:

OPTION A:  
RE-VEGETATION PER THIS SPECIFICATION:

STEP 1: PROGNOSIS\* BIOTIC SOIL MEDIA WILL BE HYDRAULICALLY APPLIED AT 4,000 POUNDS PER ACRE WITH AN APPROVED DRYLAND NATIVE SEED MIX AT 60 PLS LBS./ACRE.

STEP 2: FLEXTERRA\* FLEXIBLE GROWTH MEDIUM WILL BE HYDRAULICALLY APPLIED AT 3,500 POUNDS PER ACRE.

NOTE: TREATED SLOPES WILL BE TEMPORARILY IRRIGATED AS NEEDED BASED ON FIELD OBSERVATION OF EXPECTED GERMINATION.

OPTION B:  
PLACEMENT OF LOOSE ROCK RIP RAP WITH #50 OF 6" AND 12" BLANKET THICKNESS OVER THE ENTIRE SLOPE AREA.

**FLOOD ZONE NOTE:**  
THIS PROJECT LIES ENTIRELY WITHIN A FEMA UNSHADED ZONE X PER FIRM MAP PANEL 32031C3013G AND 32031C3225G, EFFECTIVE MARCH 16, 2009

**REFERENCE SHEET N-1 FOR NOTES**

**NOTE:**  
RETAINING WALLS TO BE PERMITTED SEPARATELY

**BENCHMARK**  
NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), AS TAKEN FROM NEVADA DEPARTMENT OF TRANSPORTATION (NDOT) CONTROL MONUMENT 1332104, HAVING A PUBLISHED ELEVATION OF 5091.40 FEET. 1332104 IS DESCRIBED AS A 3 INCH NDOT BRASS CAP ON PIPE, STAMPED "TYPON RISE 517/516/520/521 1998", 0.1 FOOT ABOVE GROUND LEVEL IN A MOUND OF STONES. A "U" CHANNEL POST AND SURVEY MARKER PADDLE ARE 10 FEET EAST AS A WITNESS. A 4 STRAND BARBED WIRE FENCE IS 2 FEET EAST. MONUMENT IS OFF OF I-80 WEST BOUND AT THE BOOMTOWN EXIT. TRAVEL SOUTH ON GARSON ROAD TO FIRE STATION (SIERRA FIRE PROTECTION DIST) AT SOUTH END OF GARSON ROAD. HEAD WEST ON GATED DIRT ROAD ON WEST SIDE OF FIRE STATION ALONG NORTH SIDE OF STEAMBOAT DITCH FOR 0.5 MILE. MONUMENT IS 100' SOUTH.

**BASIS OF BEARINGS**  
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DATE	BY	DESCRIPTION
JULY 29, 2024	N/A	
HORIZ. SCALE:	N/A	
VERT. SCALE:	N/A	
DRAWN BY:	SN	
DESIGNED BY:	MUD	
CHECKED BY:	CC	
APPROVED BY:	CC	
PROJECT #:	3110.0063	

**TOLL BROTHERS**  
1045 PROGRESS ROAD, SUITE 200  
RENO, NEVADA 89521  
PH: 775.850.2417

**RCI ENGINEERING**  
10765 DOUBLE B BLVD, SUITE 205, RENO, NEVADA 89521  
PH: 775-800-1660 FAX: 702-453-0801  
www.rcieng.com

MASS GRADING PLANS FOR  
**QUILLICI RANCH PHASE 2**  
VILLAGES 9, 10A, 10B AND 10C  
A SINGLE FAMILY RESIDENTIAL SUBDIVISION  
GRADING PLAN (SHEET 40 OF 47)

NEVADA  
CITY OF RENO

PROFESSIONAL ENGINEER  
CHRISTOPHER J. COOMBS  
Exp. 12/31/2024  
CIVIL  
No. 14872

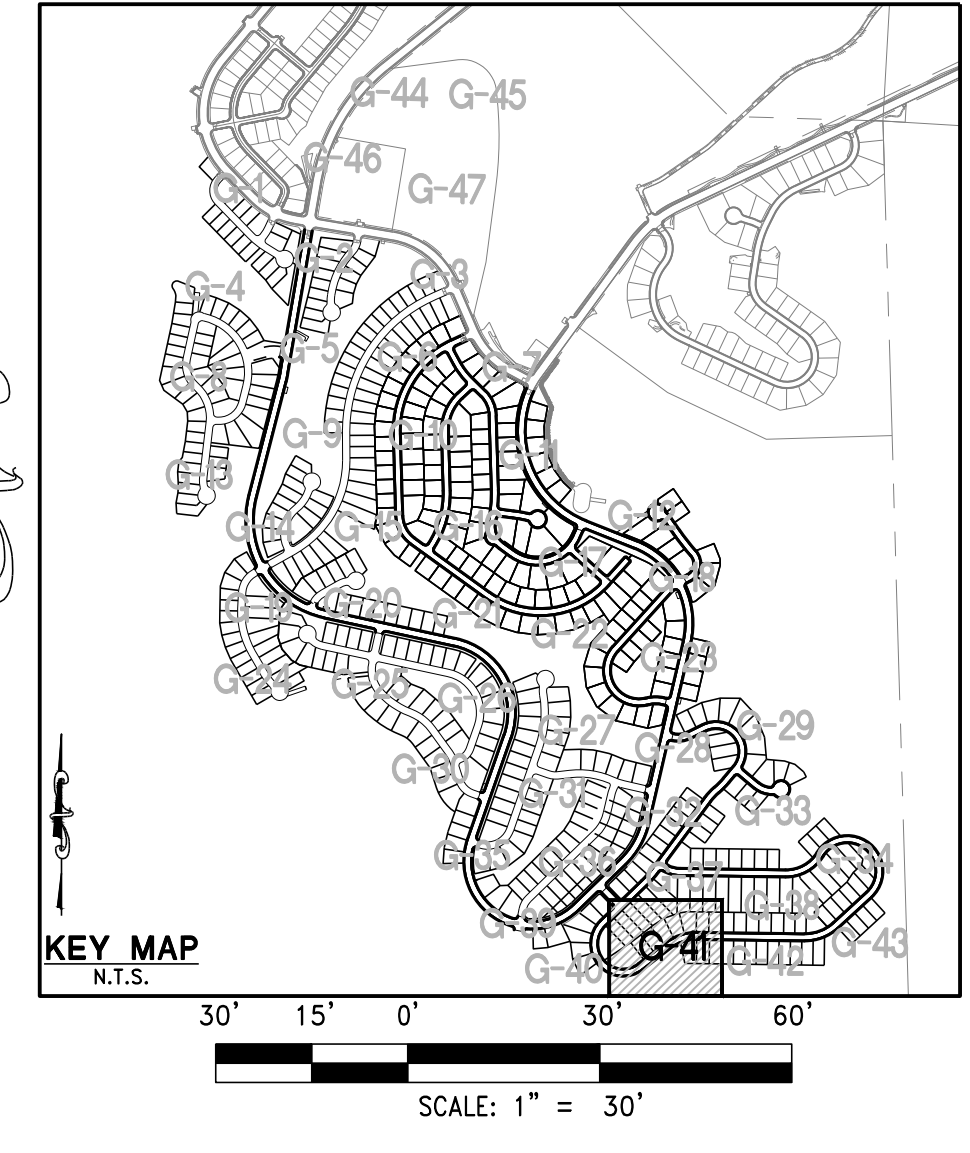
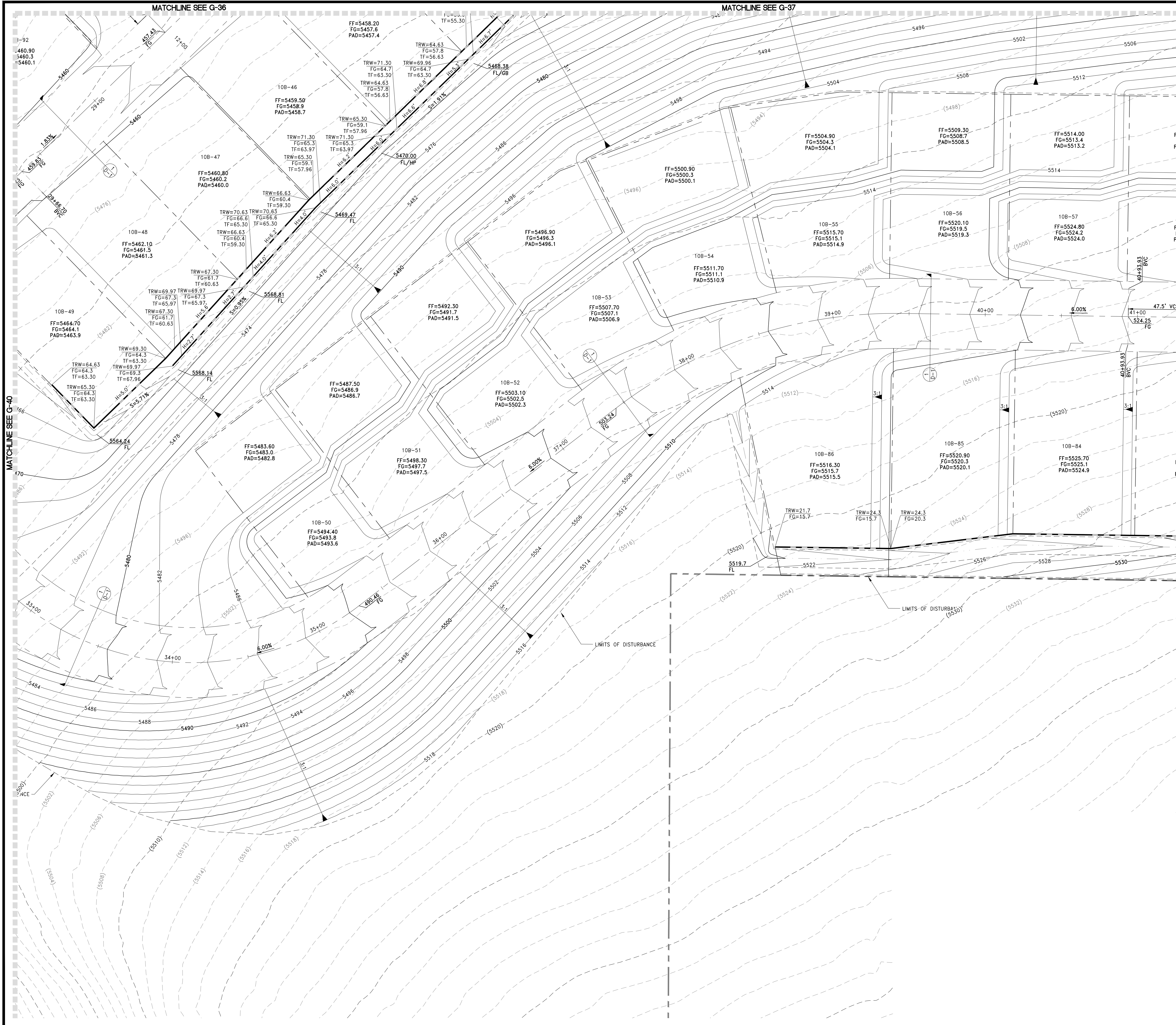
DATE: 07/29/2024

Call before you Dig  
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

**Call 811**

OR  
**1-800-642-2444**

C:\3110\_Toll\_0053\_Quillic\_Ranch\_Phase 2\_CIVIL\PIPS MASS GRADING\3003\_001\_001\_RHC-MG.dwg mpastra 7/29/24 1:00pm



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**SLOPE STABILIZATION NOTES**

ALL SLOPES WITH A GRADIENT OF GREATER THAN 3:1 SHALL BE STABILIZED WITH ONE OF THE FOLLOWING METHODS:

AREAS OF SLOPE GREATER THAN 3:1

OPTION A:  
RE-VEGETATION PER THIS SPECIFICATION:

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HORIZ. SCALE:	N/A
VERT. SCALE:	N/A
DRAWN BY:	SN
DESIGNED BY:	MJD
CHECKED BY:	CC
APPROVED BY:	CC
PROJECT #:	3110.063

**TOLL BROTHERS**  
1045 PHOENIX AVENUE, SUITE 200  
RENO, NEVADA 89521  
PH: 775.850.2417

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**MASS GRADING PLANS FOR  
QUILLICI RANCH PHASE 2  
VILLAGES 9, 10A, 10B AND 10C  
A SINGLE FAMILY RESIDENTIAL SUBDIVISION  
GRADING PLAN (SHEET 41 OF 47)**

CITY OF RENO  
STATE OF NEVADA  
PROFESSIONAL ENGINEER  
CHRISTOPHER J. COOMBS  
Exp. 12/31/2024  
CIVIL  
No. 148772

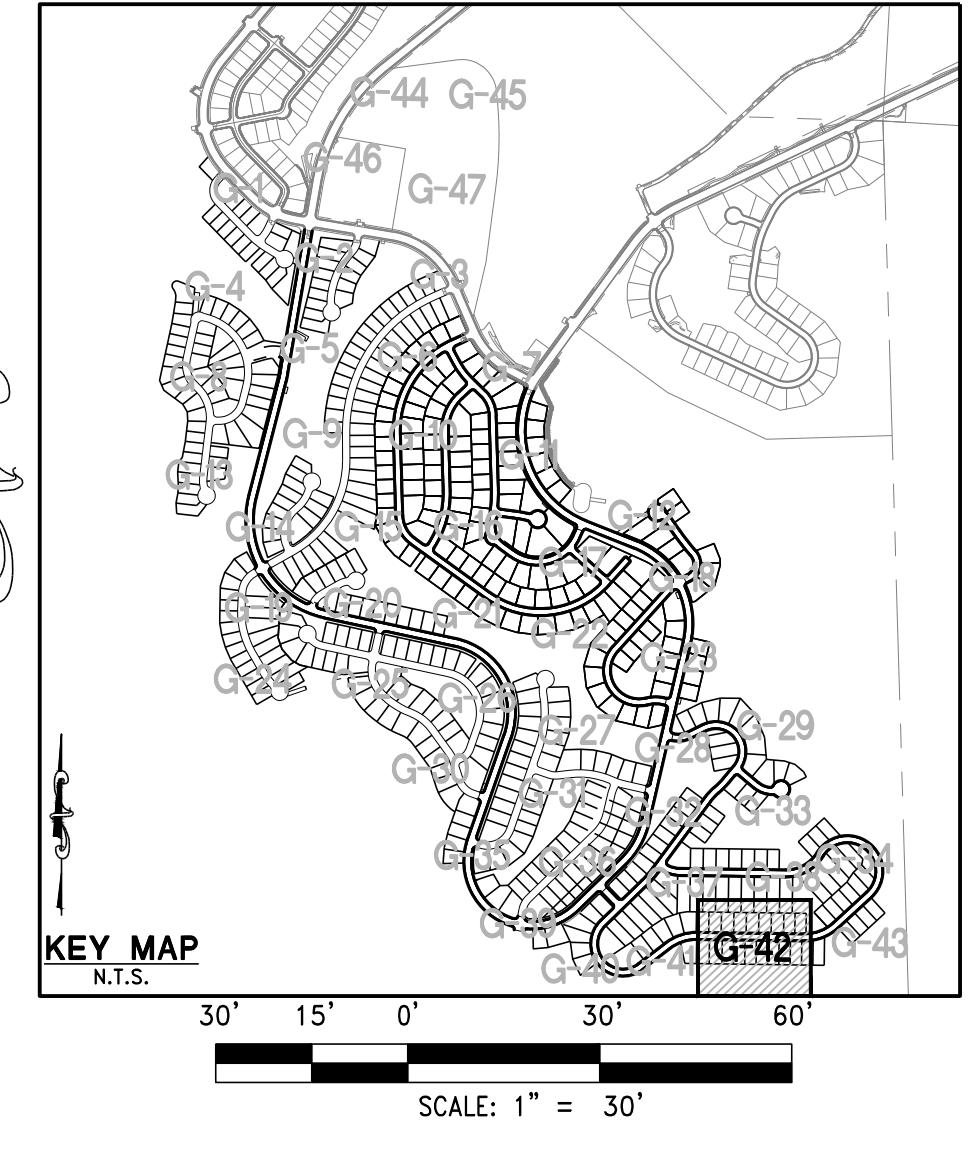
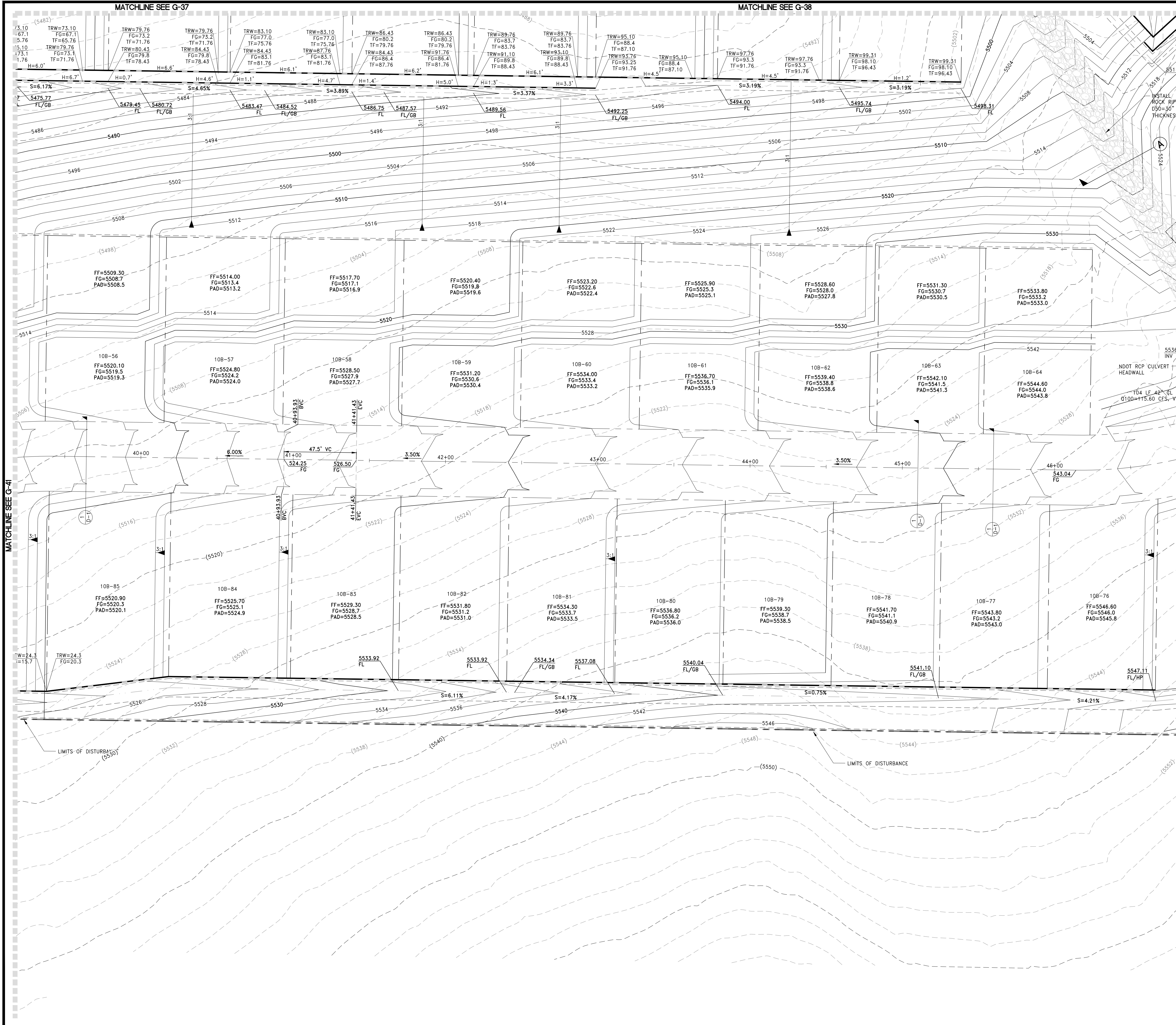
DATE: 07/29/2024

DRAWING  
**G-41**  
SHT 44 OF 56

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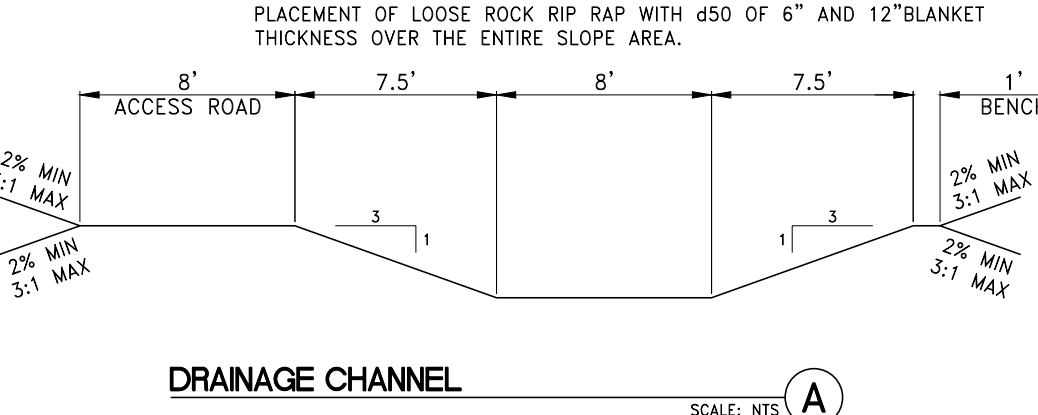
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HORIZ. SCALE:	N/A
VERT. SCALE:	N/A
DRAWN BY:	SN
DESIGNED BY:	MUD
CHECKED BY:	CC
APPROVED BY:	CC
PROJECT #:	3110.0653

**TOLL BROTHERS**  
1045 PROGRESS ROAD, SUITE 200  
RENO, NEVADA 89521  
PH: 775.850.2417

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**MASS GRADING PLANS FOR  
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VILLAGES 9, 10A, 10B AND 10C  
A SINGLE FAMILY RESIDENTIAL SUBDIVISION  
GRADING PLAN (SHEET 42 OF 47)**

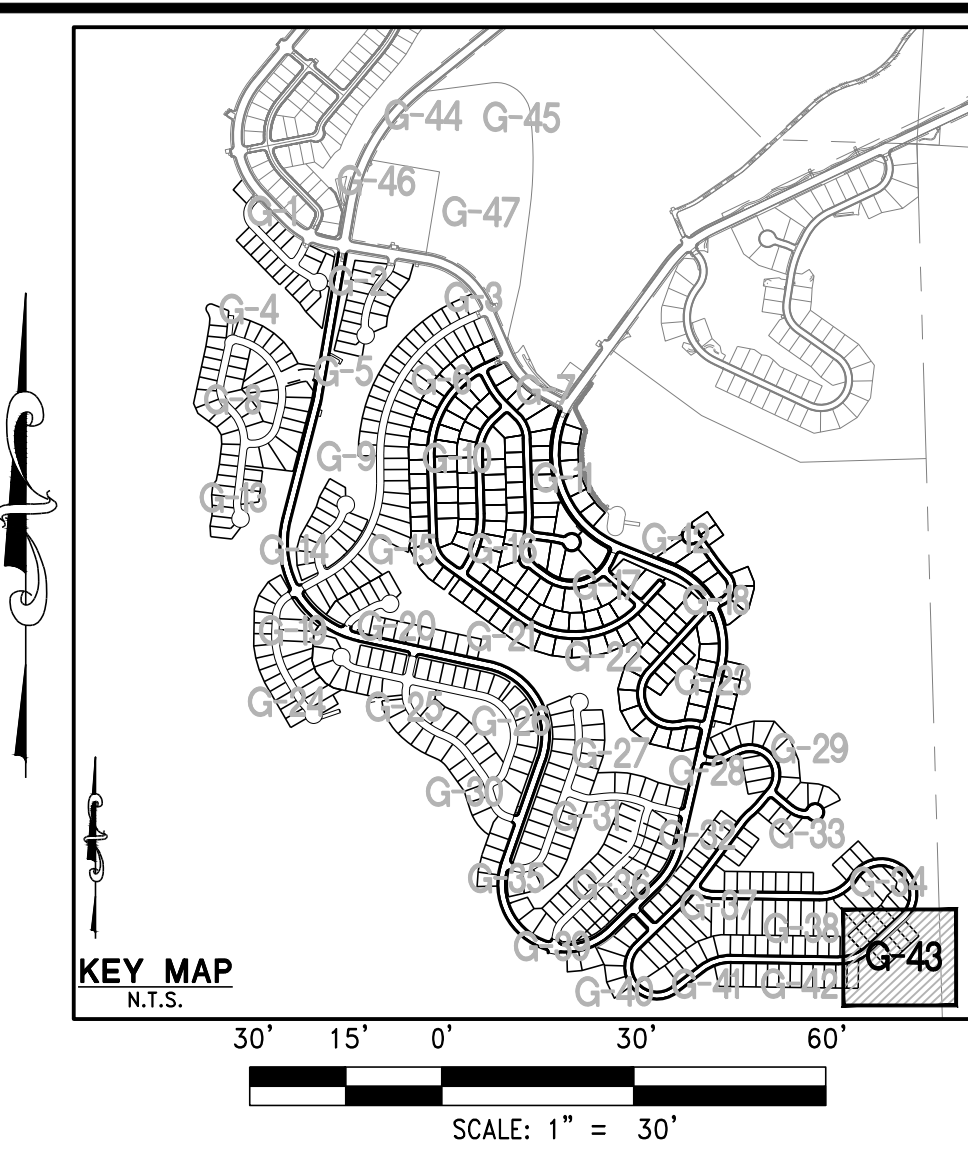
CITY OF RENO  
7/29/24 10:10am  
mpatino

DATE: 07/29/2024

PROFESSIONAL ENGINEER  
CHRISTOPHER J. COOMBS  
Exp. 12/31/2024  
CIVIL  
No. 14872

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OR  
1-800-642-2444

DRAWING  
**G-42**  
SHT 45 OF 56



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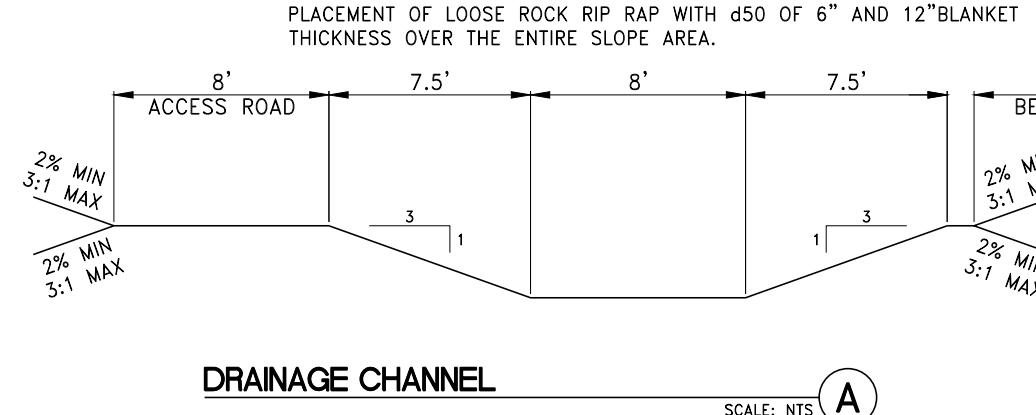
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REV	DESCRIPTION	DATE

**TOLL BROTHERS**  
1045 HARRISON BLVD., SUITE 200  
RENO, NEVADA 89521  
PH: 775.850.2417

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10765 DOUBLE B BLVD., SUITE 205, RENO, NEVADA 89521  
PH: 775-800-1660 FAX: 702-453-0801  
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MASS GRADING PLANS FOR  
**QUILLICI RANCH PHASE 2**  
VILLAGES 9, 10A, 10B AND 10C  
A SINGLE FAMILY RESIDENTIAL SUBDIVISION  
GRADING PLAN (SHEET 43 OF 47)

CITY OF RENO

PROFESSIONAL ENGINEER  
CHRISTOPHER J. COOMBS  
Exp. 12/31/2024  
CIVIL  
No. 14872

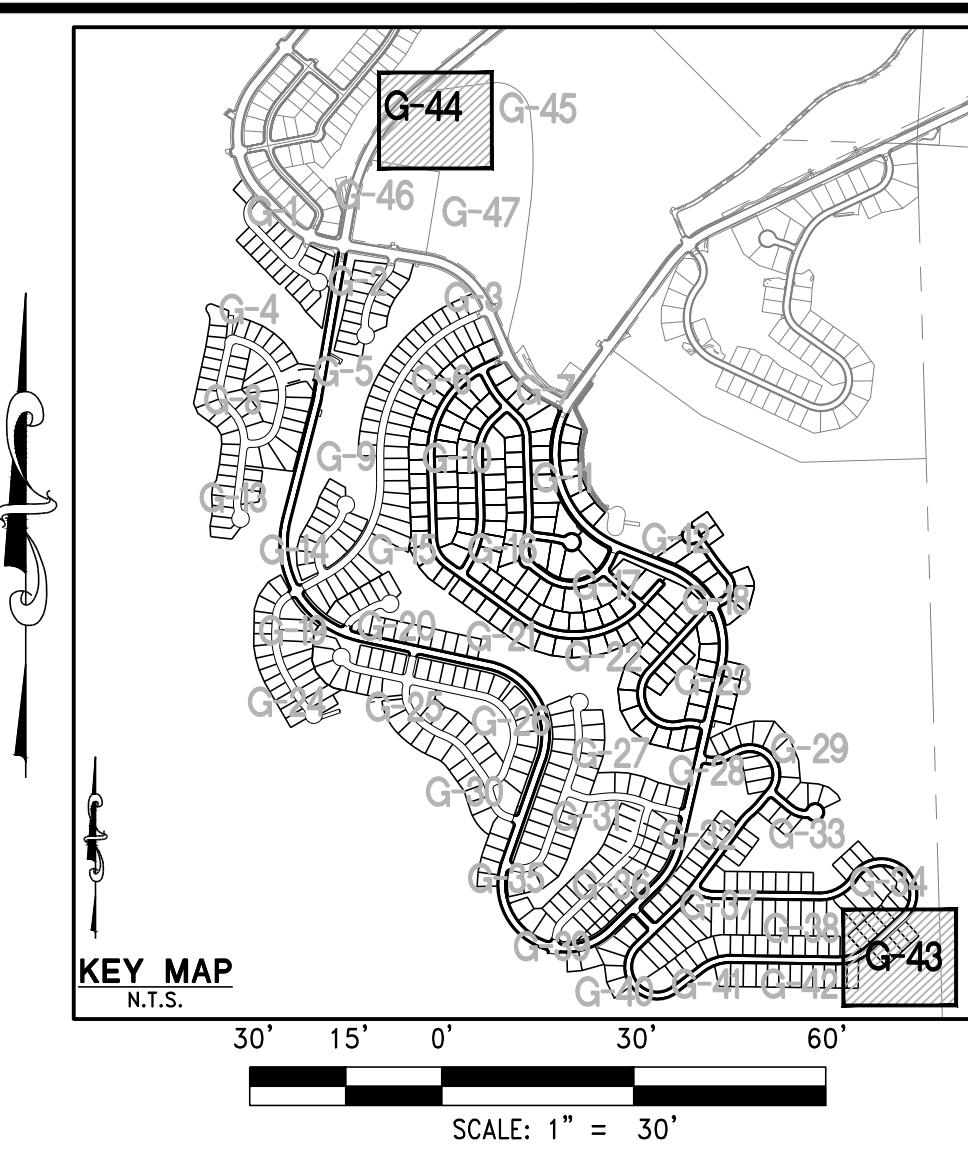
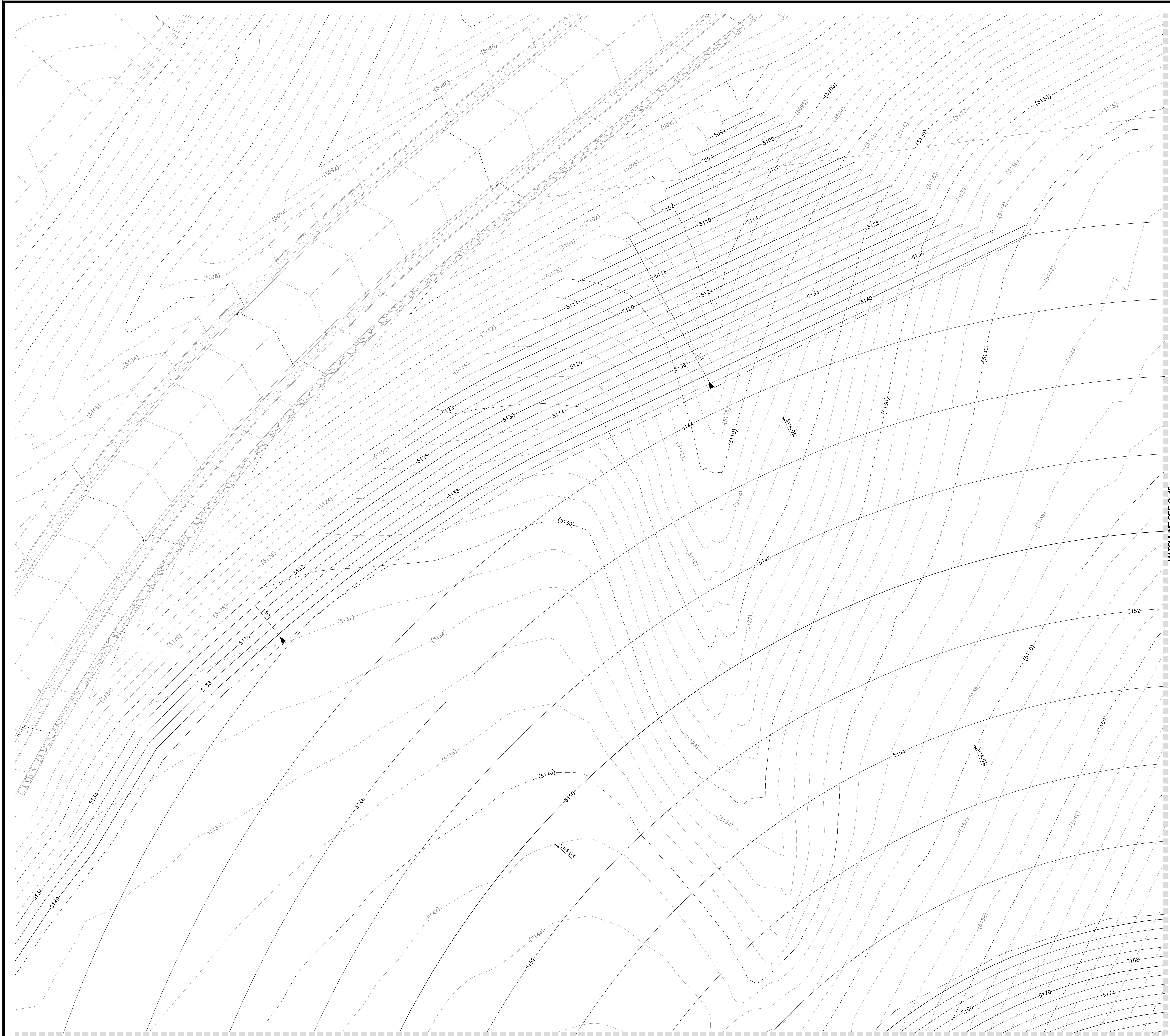
DATE: 07/29/2024

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**811**

OR  
**1-800-642-2444**

C:\3110\_Toll\_0055\_Quillic Ranch\_Phase 2\_CIVIL\_IPS\_MASS GRADING\3003\_001\_OR\_P12-MG.dwg mpalstra 7/29/24 10:18am



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PROJECT #:	3110.0063

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CITY OF RENO, NEVADA

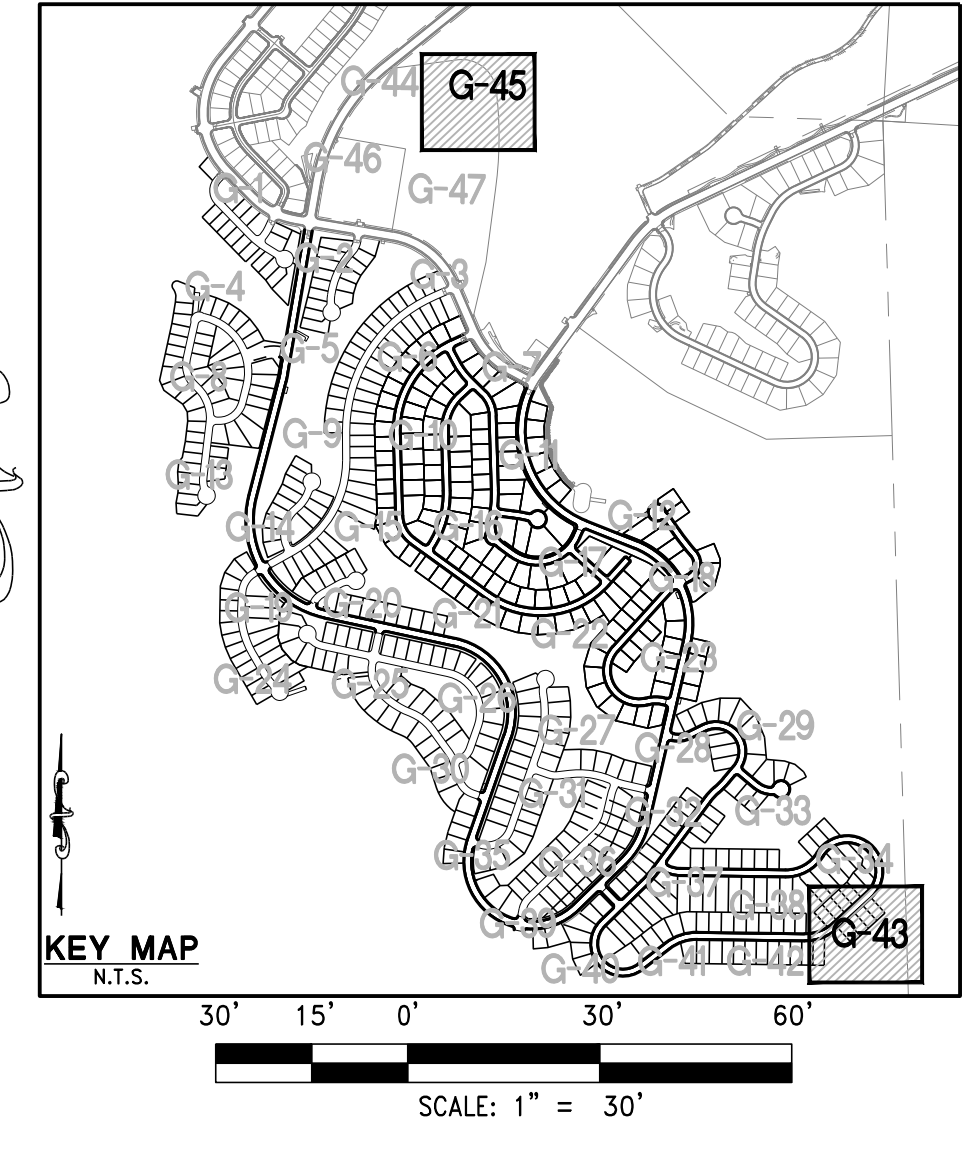
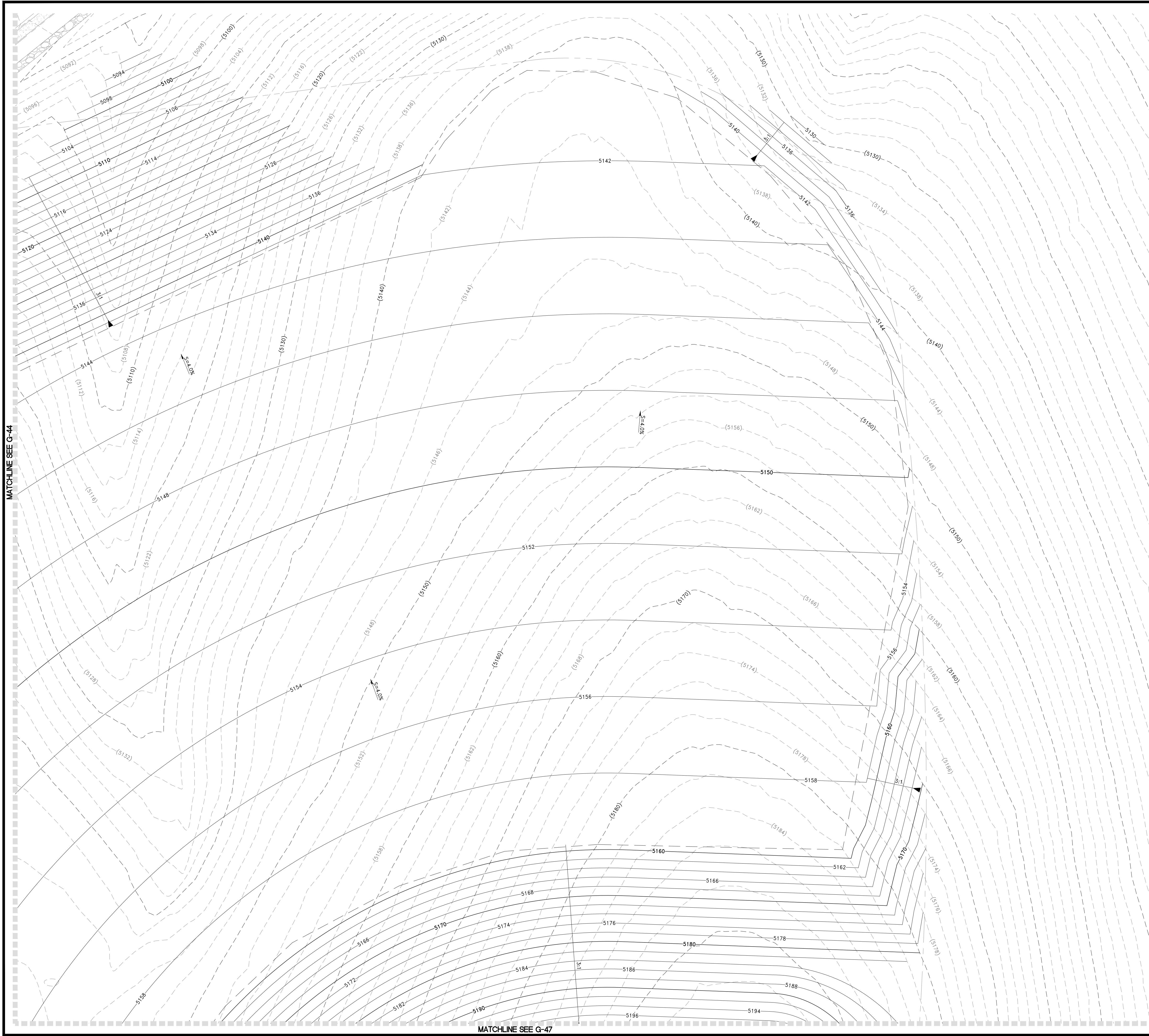
PROFESSIONAL ENGINEER  
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OPTION A:  
RE-VEGETATION PER THIS SPECIFICATION:  
STEP 1: PROGANICS® BIOTIC SOIL MEDIA WILL BE HYDRAULICALLY APPLIED AT 4,000 POUNDS PER ACRE WITH AN APPROVED DRYLAND NATIVE SEED MIX AT 60 PLS LBS./ACRE.  
STEP 2: FLEXTERRA® FLEXIBLE GROWTH MEDIUM WILL BE HYDRAULICALLY APPLIED AT 3,500 POUNDS PER ACRE.  
NOTE: TREATED SLOPES WILL BE TEMPORARILY IRRIGATED AS NEEDED BASED ON FIELD OBSERVATION OF EXPECTED GERMINATION.

OPTION B:  
PLACEMENT OF LOOSE ROCK RIP RAP WITH #50 OF 6" AND 12" BLANKET THICKNESS OVER THE ENTIRE SLOPE AREA.

**FLOOD ZONE NOTE:**  
THIS PROJECT LIES ENTIRELY WITHIN A FEMA UNSHADED ZONE X. PER FIRM MAP PANEL 32031C3019G AND 32031C3225G, EFFECTIVE MARCH 16, 2009.

**REFERENCE SHEET N-1 FOR NOTES**

**NOTE:**  
RETAINING WALLS TO BE PERMITTED SEPARATELY

**BENCHMARK**

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), AS TAKEN FROM NEVADA DEPARTMENT OF TRANSPORTATION (NDOT) CONTROL MONUMENT 1332104, HAVING A PUBLISHED ELEVATION OF 5091.40 FEET. 1332104 IS DESCRIBED AS A 3 INCH NDOT BRASS CAP ON PIPE, STAMPED "119N R18E S17/S16/S20/S21 1998 2, 0.1 FOOT ABOVE GROUND LEVEL IN A MOUND OF STONES, A "U" CHANNEL POST AND SURVEY MARKER PADDOLE ARE 10 FEET EAST AS A WITNESS. A 4 STRAND BARBED WIRE FENCE IS 2 FEET EAST. MONUMENT IS OFF OF 1-80 WEST BOUND AT THE BOOMTOWN EXIT. TRAVEL SOUTH ON GARSON ROAD TO FIRE STATION (SIERRA FIRE PROTECTION DIST) AT SOUTH END OF GARSON ROAD. HEAD WEST ON GATED DIRT ROAD ON WEST SIDE OF FIRE STATION ALONG NORTH SIDE OF STEAMBOAT DITCH FOR 0.5 MILE. MONUMENT IS 100' SOUTH.

**BASIS OF BEARINGS**

GRID NORTH, MODIFIED NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983/1984 (NAD 83/84) DETERMINED USING REAL TIME KINEMATIC GPS (RTK GPS) OBSERVATIONS OF NEVADA DEPARTMENT OF TRANSPORTATION (NDOT) CONTROL MONUMENTS 1332104 AND 1332107. COMBINED GRID TO GROUND FACTOR = 1.000197939. ALL DISTANCES SHOWN HERE ARE GROUND VALUES.

DATE:	JULY 29, 2024
HORIZ. SCALE:	N/A
VERT. SCALE:	N/A
DRAWN BY:	SN
DESIGNED BY:	MJD
CHECKED BY:	CC
APPROVED BY:	CC
PROJECT #:	3110.0063

**TOLL BROTHERS**  
1045 PROGRESS BLVD., SUITE 200  
RENO, NEVADA 89521  
PH: 775.850.2417

**RCI ENGINEERING**  
10765 DOUBLE B BLVD., SUITE 205, RENO, NEVADA 89521  
PH: 775-800-1660 FAX: 702-453-0801  
www.rcieng.com

MASS GRADING PLANS FOR  
**QUILLICI RANCH PHASE 2**  
VILLAGES 9, 10A, 10B AND 10C  
A SINGLE FAMILY RESIDENTIAL SUBDIVISION  
GRADING PLAN (SHEET 45 OF 47)

CITY OF RENO  
NEVADA

PROFESSIONAL ENGINEER  
CHRISTOPHER J. COOMBS  
Exp. 12/31/2024  
CIVIL  
No. 14872

DATE: 07/29/2024

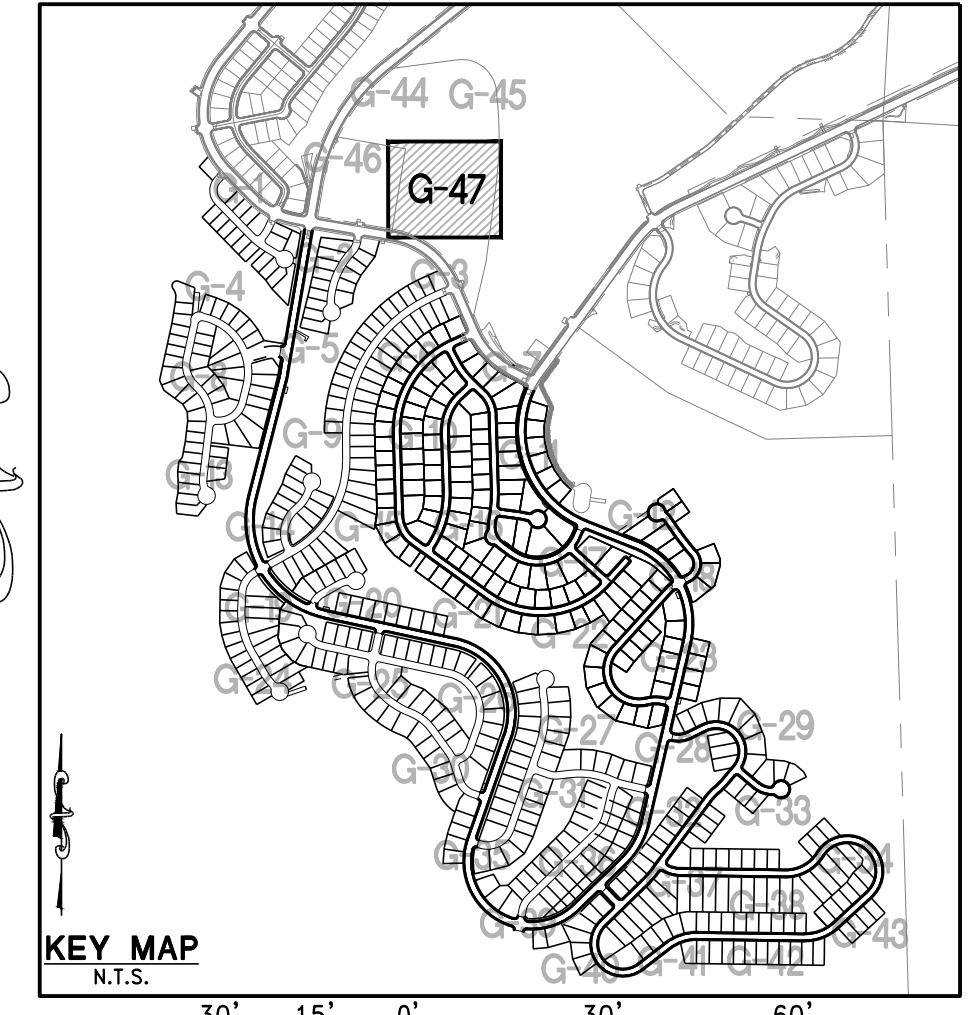
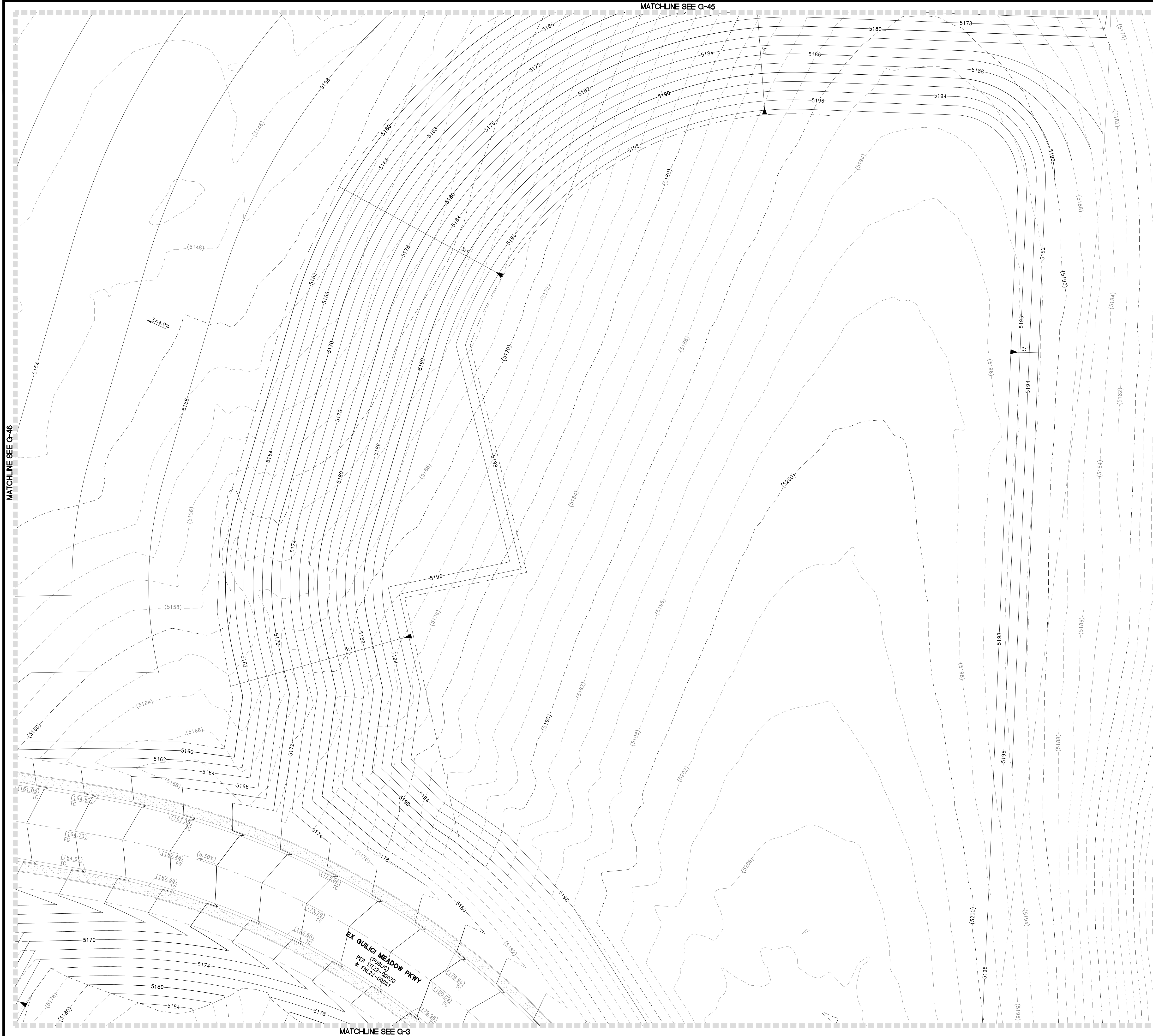
Call before you Dig  
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

**Call 811**

OR  
**1-800-642-2444**



MATCHLINE SEE G-45



**NOTES**

THESE PLANS ARE FOR MASS GRADING PURPOSES ONLY. THE SITE SHALL BE FINE GRADED UNDER SEPARATE PERMIT. APPROVAL OF THIS PERMIT IS AT THE DEVELOPER'S RISK. ANY CHANGES/REVISIONS AS REQUIRED AT THE FINAL MAP PHASE MUST BE COMPLETED AT THE SOLE RESPONSIBILITY OF THE DEVELOPER.

UPON COMPLETION OF THE GRADING AND PRIOR TO APPLICATION OF VEGETATION MATERIALS, REPRESENTATIVES FROM THE DEVELOPER, THE CONTRACTOR, THE ENGINEER OF RECORD AND CITY OF RENO SHALL MEET ON THE SITE TO DETERMINE THE FINAL SLOPE GRADING AND SLOPE TREATMENTS.

**SLOPE STABILIZATION NOTES**

ALL SLOPES WITH A GRADIENT OF GREATER THAN 3:1 SHALL BE STABILIZED WITH ONE OF THE FOLLOWING METHODS:

OPTION A:  
RE-VEGETATION PER THIS SPECIFICATION:  
STEP 1: PROGANICS® BIOTIC SOIL MEDIA WILL BE HYDRAULICALLY APPLIED AT 4,000 POUNDS PER ACRE WITH AN APPROVED DRYLAND NATIVE SEED MIX AT 60 PLS LBS./ACRE.  
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OPTION B:  
PLACEMENT OF LOOSE ROCK RIP RAP WITH #50 OF 6" AND 12" BLANKET THICKNESS OVER THE ENTIRE SLOPE AREA.

**FLOOD ZONE NOTE:**

THIS PROJECT LIES ENTIRELY WITHIN A FEMA UNSHADED ZONE X PER FIRM MAP PANEL 32031C3019G AND 32031C3225G, EFFECTIVE MARCH 16, 2009.

**REFERENCE SHEET N-1 FOR NOTES**

NOTE:  
RETAINING WALLS TO BE PERMITTED SEPARATELY

**BENCHMARK**

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), AS TAKEN FROM NEVADA DEPARTMENT OF TRANSPORTATION (NDOT) CONTROL MONUMENT 1332104, HAVING A PUBLISHED ELEVATION OF 5091.40 FEET. 1332104 IS DESCRIBED AS A 3 INCH NDOT BRASS CAP ON PIPE, STAMPED "119N R18E S17/S16/S20/S21 1998", 0.1 FOOT ABOVE GROUND LEVEL IN A MOUND OF STONES. A "U" CHANNEL POST AND SURVEY MARKER PADDOLE ARE 10 FEET EAST AS A WITNESS. A 4 STRAND BARBED WIRE FENCE IS 2 FEET EAST. MONUMENT IS OFF OF 1-80 WEST BOUND AT THE BOOMTOWN EXIT. TRAVEL SOUTH ON GARSON ROAD TO FIRE STATION (SIERRA FIRE PROTECTION DIST) AT SOUTH END OF GARSON ROAD, HEAD WEST ON GATED DIRT ROAD ON WEST SIDE OF FIRE STATION ALONG NORTH SIDE OF STEAMBOAT DITCH FOR 0.5 MILE. MONUMENT IS 100' SOUTH.

**BASIS OF BEARINGS**

GRID NORTH, MODIFIED NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983/1984 (NAD 83/84) DETERMINED USING REAL TIME KINEMATIC GPS (RTK GPS) OBSERVATIONS OF NEVADA DEPARTMENT OF TRANSPORTATION (NDOT) CONTROL MONUMENTS 1332104 AND 1332107. COMBINED GRID TO GROUND FACTOR = 1.000197939. ALL DISTANCES SHOWN HERE ARE GROUND VALUES.

REV	DESCRIPTION	DATE

**TOLL BROTHERS**  
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PH: 775.850.2417

**RCI ENGINEERING**  
10765 DOUBLE B BLVD., SUITE 205, RENO, NEVADA 89521  
PH: 775-800-1660 FAX: 702-451-0801  
www.rcieng.com

MASS GRADING PLANS FOR  
**QUILLICI RANCH PHASE 2**  
VILLAGES 9, 10A, 10B AND 10C  
A SINGLE FAMILY RESIDENTIAL SUBDIVISION  
GRADING PLAN (SHEET 47 OF 47)

CITY OF RENO

PROFESSIONAL ENGINEER  
CHRISTOPHER J. COOMBS  
Exp. 12/31/2024  
CIVIL  
No. 14872

DATE: 07/29/2024

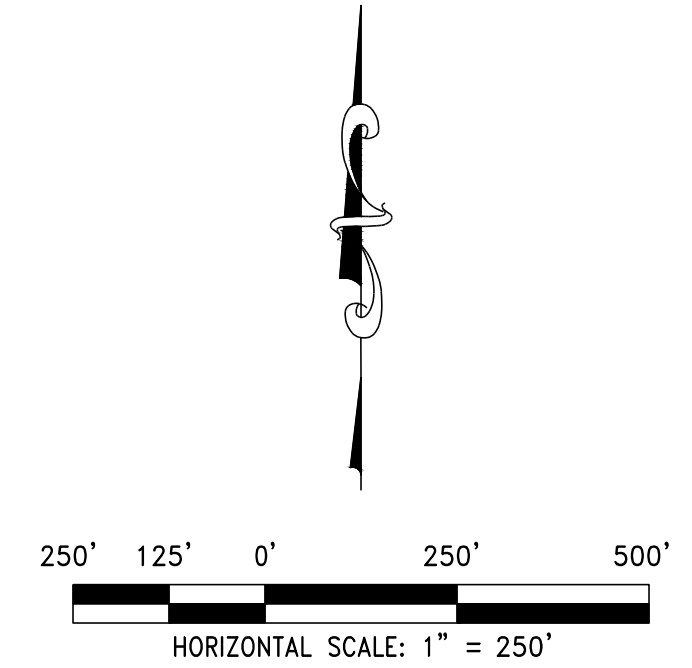
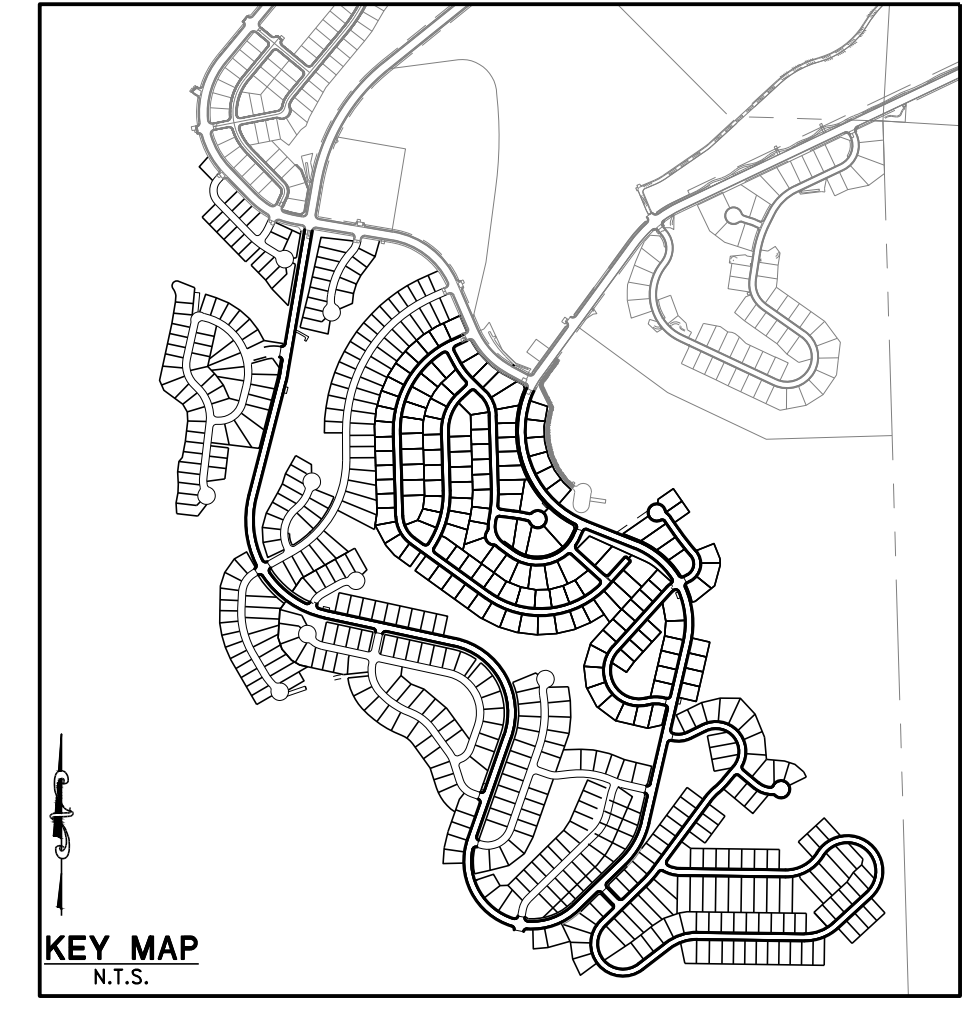
Call before you Dig  
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

**Call 811**

OR  
**1-800-642-2444**



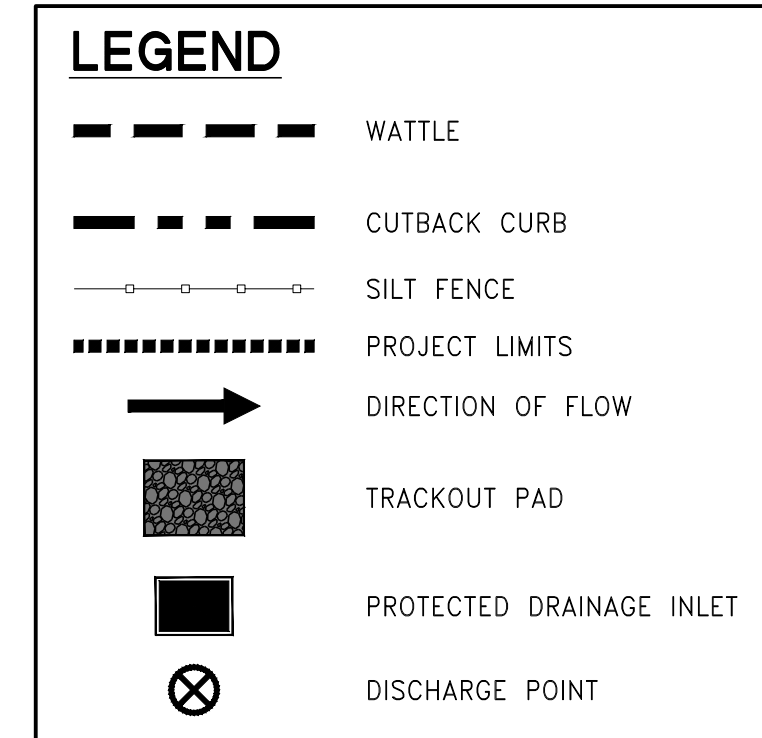
USA  
APN 038-190-45



**TRUCKEE MEADOWS REGIONAL  
STORMWATER QUALITY NOTES**

1. THE OWNER, SITE DEVELOPER, CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE FOR SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATE IN, THE PUBLIC RIGHTS OF WAYS OF THE CITY OF RENO AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION-SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN THE CITY OF RENO AND THE TRUCKEE MEADOWS CONSTRUCTION SITE BEST MANAGEMENT PRACTICES HANDBOOK.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO STORMWATER GENERAL PERMIT NVR100000, SECTION 1.B.A.b. (2).
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS AND ALL BMPs WEEKLY, PRIOR TO A FORECASTED RAIN EVENT AND WITHIN 24 HOURS AFTER ANY ACTUAL RAIN EVENT. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS FROZEN GROUND CONDITIONS OR SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO STORMWATER GENERAL PERMIT NVR100000, SECTION 1.B.A.g.
5. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 30 PERCENT OR MORE.

PROJECT DURATION: 06-01-2024 TO 06-01-2025  
TOTAL PROJECT AREA: 229.2± AC



**FLOOD ZONE**

THIS PROJECT LIES ENTIRELY WITHIN A FEMA UNSHADED ZONE X PER FIRM MAP PANEL 32031C3013G AND 32031C3225G, EFFECTIVE MARCH 16, 2009

**BENCHMARK**

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), AS TAKEN FROM NEVADA DEPARTMENT OF TRANSPORTATION (NDOT) CONTROL MONUMENT 1332104, HAVING A PUBLISHED ELEVATION OF 5091.40 FEET. 1332104 IS DESCRIBED AS A 3 INCH NODD BRASS CAP ON PIPE, STAMPED "119N R18E S17/S16/S20/S21 1998 ±, 0.1 FOOT ABOVE GROUND LEVEL IN A MOUND OF STONES. A "U" CHANNEL POST AND SURVEY MARKER PADDLE ARE 10 FEET EAST AS A WITNESS. A 4 STRAND BARBED WIRE FENCE IS 2 FEET EAST. MONUMENT IS OFF OF 1-80 WEST BOUND AT THE BOOMTOWN EXIT. TRAVEL SOUTH ON GARSON ROAD TO FIRE STATION (SIERRA FIRE PROTECTION DIST) AT SOUTH END OF GARSON ROAD. HEAD WEST ON GATED DIRT ROAD ON WEST SIDE OF FIRE STATION ALONG NORTH SIDE OF STEAMBOAT DITCH FOR 0.5 MILE. MONUMENT IS 100' SOUTH.

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DATE: JULY 29, 2024	REV: _____	DESCRIPTION: _____
HORIZ. SCALE: X	REV: _____	DESCRIPTION: _____
VERT. SCALE: X	REV: _____	DESCRIPTION: _____
DRAWN BY: SN	REV: _____	DESCRIPTION: _____
DESIGNED BY: MJD	REV: _____	DESCRIPTION: _____
CHECKED BY: CC	REV: _____	DESCRIPTION: _____
APPROVED BY: CC	REV: _____	DESCRIPTION: _____
PROJECT #: 3110.0053	REV: _____	DESCRIPTION: _____

**TOLL BROTHERS**  
1045 HUNTERS BLVD., SUITE 200  
RENO, NEVADA 89521  
PH: 775.850.2417

**RCI ENGINEERING**  
10765 DOUBLE 8 BLVD., SUITE 205, RENO, NEVADA 89521  
PH: 775-800-1660 FAX: 702-451-0801  
www.rcieng.com

**MASS GRADING PLANS FOR  
QUILLICI RANCH PHASE 2  
VILLAGES 9, 10A, 10B AND 10C  
A SINGLE FAMILY RESIDENTIAL SUBDIVISION  
EROSION CONTROL (SHEET 1 OF 1)**

NEVADA  
CITY OF RENO  
PROFESSIONAL ENGINEER  
CHRISTOPHER J. COOMBS  
Exp. 12/31/2024  
CIVIL  
No. 14872  
DATE: 07/29/2024

DRAWING  
**EC-1**  
SHT 51 OF 56

C:\3110\_Toll\_0053\_Quilici\_Ranch\_Phase 2\_CIVIL\_IPS MASS GRADING\3004\_EC01\_OR\_P12-WG.dwg mportno 7/29/24 10:14am





LOG OF BORING 2-B2																																																													
<b>LOG OF BORING 2-B2</b> LATITUDE: 39.460719      LONGITUDE: -119.972535 Geotechnical Exploration Santerra - Quilici Properties Reno, Nevada 7172.002.000																																																													
DATE DRILLED: 10/20/2020      LOGGED / REVIEWED BY: A. Hauger / NMG HOLE DEPTH: Approx. 6 ft.      DRILLING CONTRACTOR: Cascade Drilling HOLE DIAMETER: 8.0 in.      DRILLING METHOD: Hollow Stem Auger SURF ELEV (MSL): Approx. 5472 ft.      HAMMER TYPE: 140 lb. Auto Trip																																																													
Depth in Feet Elevation in Feet Sample Type	<table border="1" style="width: 100%;"> <thead> <tr> <th colspan="2">DESCRIPTION</th> <th>Water Level</th> <th>Blow Count/ft</th> <th>Liquid Limit</th> <th>Plastic Limit</th> <th>Plasticity Index</th> <th>Fines Content (%) (passing #200 sieve)</th> <th>Moisture Content (%) (passing #200 sieve)</th> <th>Shrinkage (%) (passing #200 sieve)</th> <th>Dry Unit Weight (pcf)</th> <th>Unconfined Strength (psf) (approx)</th> </tr> </thead> <tbody> <tr> <td>0 - 4.5'</td> <td>FAT CLAY WITH SAND (CH), reddish brown, hard, moist, high plasticity, fine to medium-grained sand, trace coarse gravel, [QUATERNARY OLDER ALLUVIUM]</td> <td></td> <td>29</td> <td></td> <td></td> <td></td> <td></td> <td>19</td> <td>100</td> <td></td> <td>&gt;4.5'</td> </tr> <tr> <td>4.5 - 5'</td> <td>POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), yellowish brown, dense, moist, fine to coarse gravel, approximately 15% fine- to medium-grained sand</td> <td></td> <td>52</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5 - 5'</td> <td>POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), yellowish brown, very dense, moist, fine to coarse-grained sand, fine to coarse gravel, gravel and cobbles</td> <td></td> <td>503</td> <td></td> <td></td> <td></td> <td></td> <td>5</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="12">           Bottom of boring at 6 feet due to auger refusal on cobble. No groundwater encountered.         </td> </tr> </tbody> </table>	DESCRIPTION		Water Level	Blow Count/ft	Liquid Limit	Plastic Limit	Plasticity Index	Fines Content (%) (passing #200 sieve)	Moisture Content (%) (passing #200 sieve)	Shrinkage (%) (passing #200 sieve)	Dry Unit Weight (pcf)	Unconfined Strength (psf) (approx)	0 - 4.5'	FAT CLAY WITH SAND (CH), reddish brown, hard, moist, high plasticity, fine to medium-grained sand, trace coarse gravel, [QUATERNARY OLDER ALLUVIUM]		29					19	100		>4.5'	4.5 - 5'	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), yellowish brown, dense, moist, fine to coarse gravel, approximately 15% fine- to medium-grained sand		52									5 - 5'	POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), yellowish brown, very dense, moist, fine to coarse-grained sand, fine to coarse gravel, gravel and cobbles		503					5				Bottom of boring at 6 feet due to auger refusal on cobble. No groundwater encountered.											
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LOG OF BORING 2-B5																																																																									
<b>LOG OF BORING 2-B5</b> LATITUDE: 39.46221      LONGITUDE: -119.977937 Geotechnical Exploration Santerra - Quilici Properties Reno, Nevada 7172.002.000																																																																									
DATE DRILLED: 10/21/2020      LOGGED / REVIEWED BY: A. Hauger / NMG HOLE DEPTH: Approx. 7 1/2 ft.      DRILLING CONTRACTOR: Cascade Drilling HOLE DIAMETER: 8.0 in.      DRILLING METHOD: Hollow Stem Auger SURF ELEV (MSL): Approx. 5476 ft.      HAMMER TYPE: 140 lb. Auto Trip																																																																									
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TEST PIT LOG 2-TP18								
<b>TEST PIT LOG 2-TP18</b> Santerra - Quilici Properties Reno, Nevada 7172.002.000								
Logged By: Stephen Blakely Logged Date: October 9, 2020 Equipment: Komatsu PC228US LC								
Latitude: 39.493900° Longitude: -119.974862° Surface Elevation: 5,466'								
Depth (Feet)	Description	Depth of Test (Feet)	Moisture Content (%)	Fines Content (%)	Liquid Limit (%)	Plasticity Index (%)	Expansion Index (%)	Uncon Comp (Tsf) Field Approx.
0	Surface Conditions: Nested subangular volcanic boulders up to 4 feet in maximum dimension							
0 - 4 1/2'	CLAYEY GRAVEL WITH SAND (GC), brown, subangular boulders up to 4 feet in maximum dimension (volcanic), clast-supported with matrix of FAT CLAY (CH), high plasticity, high toughness, approximately 10% fine- to medium-grained sand [LANDSLIDE DEBRIS]	1						4.0'
3	Grades to fine to coarse angular gravel, approximately 40% high plasticity fines, approximately 20% fine- to coarse-grained sand							
4 1/2 - 16'	SANDSTONE, dark yellowish brown, medium strong, moderately weathered, fine grained, thinly bedded with a few coarse grained tuffaceous and some claystone interbeds, closely fractured [HUNTER CREEK FORMATION]							
8 1/2'	Grades to medium to coarse grained SANDSTONE, moderately spaced fractures							
16	Bottom of test pit at 16 feet. No groundwater encountered.							

TEST PIT LOG 2-TP21								
<b>TEST PIT LOG 2-TP21</b> Santerra - Quilici Properties Reno, Nevada 7172.002.000								
Logged By: Stephen Blakely Logged Date: October 9, 2020 Equipment: Komatsu PC228US LC								
Latitude: 39.494081° Longitude: -119.977805° Surface Elevation: 5,403'								
Depth (Feet)	Description	Depth of Test (Feet)	Moisture Content (%)	Fines Content (%)	Liquid Limit (%)	Plasticity Index (%)	Expansion Index (%)	Uncon Comp (Tsf) Field Approx.
0	Surface Conditions: No desert pavement or varnish; subangular volcanic boulders up to 3 feet in maximum dimension							
0 - 2 1/2'	CLAYEY GRAVEL WITH SAND (GC), dark brown, dense, moist, subrounded fine to coarse gravel and boulders up to 2 feet in maximum dimension, medium plasticity, low toughness fines, approximately 20% fine- to coarse-grained sand [QUATERNARY OLDER ALLUVIUM]	1		32%			38	4.0'
2 1/2 - 5'	CLAYEY SAND WITH GRAVEL (SC), dark yellowish brown, very dense, moist, fine- to coarse-grained sand, approximately 20% low to medium plasticity fines, approximately 20% subrounded fine to coarse gravel	2.5						>4.5'
5 - 17'	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), brown, very dense, moist, subangular to subrounded fine to coarse gravel, cobbles, and boulders up to 3 feet in maximum dimension, fine- to coarse-grained sand, approximately 10% low plasticity fines							
17	Bottom of test pit at 17 feet. No groundwater encountered.							

TEST PIT LOG 2-TP24								
<b>TEST PIT LOG 2-TP24</b> Santerra - Quilici Properties Reno, Nevada 7172.002.000								
Logged By: Stephen Blakely Logged Date: October 12, 2020 Equipment: Komatsu PC228US LC								
Latitude: 39.491731° Longitude: -119.978505° Surface Elevation: 5,485'								
Depth (Feet)	Description	Depth of Test (Feet)	Moisture Content (%)	Fines Content (%)	Liquid Limit (%)	Plasticity Index (%)	Expansion Index (%)	Uncon Comp (Tsf) Field Approx.
0	Surface Conditions: Soil and volcanic boulders up to 3 feet in maximum dimension							
0 - 12'	CLAYEY GRAVEL WITH SAND (GC), brown, very dense, slightly moist, subangular fine to coarse gravel, cobbles, and boulders up to 18 inches in maximum dimension, approximately 30% high plasticity, high toughness fines, approximately 15% fine- to coarse-grained sand [QUATERNARY OLDER ALLUVIUM]							
3	Grades to yellowish brown, moist, approximately 30% fine- to coarse-grained sand	3		29%			37	
8	Grades to approximately 25% fines, approximately 40% fine- to coarse-grained sand	8		25%	43	19		
12	Bottom of test pit at 12 feet due practical refusal on boulders. No groundwater encountered.							

TEST PIT LOG 2-TP16								
<b>TEST PIT LOG 2-TP16</b> Santerra - Quilici Properties Reno, Nevada 7172.002.000								
Logged By: Stephen Blakely Logged Date: October 8, 2020 Equipment: Komatsu PC228US LC								
Latitude: 39.493441° Longitude: -119.974900° Surface Elevation: 5,488'								
Depth (Feet)	Description	Depth of Test (Feet)	Moisture Content (%)	Fines Content (%)	Liquid Limit (%)	Plasticity Index (%)	Expansion Index (%)	Uncon Comp (Tsf) Field Approx.
0	Surface Conditions: Little desert pavement and varnish; subangular boulders up to 5 feet in maximum dimension							
0 - 2'	CLAYEY GRAVEL WITH SAND (GC), dark brown, very dense, moist, subangular to subrounded coarse gravel, cobbles, and boulders up to 5 feet in maximum dimension, approximately 20% high plasticity fines, approximately 10% fine- to coarse-grained sand [QUATERNARY OLDER ALLUVIUM]	1						>4.5'
2 - 4'	SILTY GRAVEL WITH SAND (GM), reddish brown, very dense, moist, subangular to subrounded coarse gravel, cobbles, and boulders up to 5 feet in maximum dimension, approximately 20% low plasticity fines, approximately 10% fine- to coarse-grained sand							
4 - 12'	CLAYEY GRAVEL WITH SAND (GC), reddish yellow, very dense, moist, subangular to subrounded coarse gravel and boulders to 5 feet max dimension, low plasticity fines, fine- to coarse-grained sand, clast-supported with a clayey sand matrix							
12	Bottom of test pit at 12 feet due to practical refusal on andesite boulders. No groundwater encountered.							

TEST PIT LOG 2-TP20								
<b>TEST PIT LOG 2-TP20</b> Santerra - Quilici Properties Reno, Nevada 7172.002.000								
Logged By: Stephen Blakely Logged Date: October 9, 2020 Equipment: Komatsu PC228US LC								
Latitude: 39.492420° Longitude: -119.975463° Surface Elevation: 5,492'								
Depth (Feet)	Description	Depth of Test (Feet)	Moisture Content (%)	Fines Content (%)	Liquid Limit (%)	Plasticity Index (%)	Expansion Index (%)	Uncon Comp (Tsf) Field Approx.
0	Surface Conditions: Some desert pavement development, little varnish; subangular volcanic boulders up to 2.5 feet in maximum dimension are weathered with moderate to dense lichen growth							
0 - 2 1/2'	GRAVELLY FAT CLAY (CH), dark yellowish brown, hard, moist, high plasticity, very high toughness, subangular to subrounded coarse gravel and boulders up to 2 1/2 feet in maximum dimension [QUATERNARY INTERMEDIATE ALLUVIUM]	1						>4.5'
2 1/2 - 8'	POORLY GRADED SAND WITH GRAVEL (SP), yellowish brown, very dense, moist, fine- to coarse-grained sand, trace low plasticity fines, subangular to subrounded coarse gravel and boulders up to 18 inches in maximum dimension, some cementation	3.5		13				
8 - 16 1/2'	SILTY GRAVEL WITH SAND (GM), yellowish brown, very dense, moist, subangular to subrounded fine to coarse gravel and boulders up to 18 inches in maximum dimension, 36% fine- to coarse-grained sand, low plasticity fines	9.5		25	16%			
16 1/2'	Bottom of test pit at 16 1/2 feet. No groundwater encountered.							

TEST PIT LOG 2-TP23								
<b>TEST PIT LOG 2-TP23</b> Santerra - Quilici Properties Reno, Nevada 7172.002.000								
Logged By: Stephen Blakely Logged Date: October 9, 2020 Equipment: Komatsu PC228US LC								
Latitude: 39.491292° Longitude: -119.980269° Surface Elevation: 5,460'								
Depth (Feet)	Description	Depth of Test (Feet)	Moisture Content (%)	Fines Content (%)	Liquid Limit (%)	Plasticity Index (%)	Expansion Index (%)	Uncon Comp (Tsf) Field Approx.
0	Surface Conditions: Soil with scattered boulders up to 6 feet in maximum dimension							
0 - 3'	CLAYEY GRAVEL WITH SAND (GC), brown, dense, moist, subangular fine to coarse gravel and cobble up to 12 inches in maximum dimension, approximately 35% high plasticity fines, approximately 20% fine- to coarse-grained sand, trace boulders [QUATERNARY OLDER ALLUVIUM]							
3 - 17'	POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM), yellowish brown, very dense, moist, subangular to subrounded fine to coarse gravel, cobble, and boulders up to 18 inches in maximum dimension, approximately 40% fine- to coarse-grained sand, approximately 10% low plasticity fines	4.5					11	
17	Bottom of test pit at 17 feet. No groundwater encountered.							

TEST PIT LOG 2-TP15								
<b>TEST PIT LOG 2-TP15</b> Santerra - Quilici Properties Reno, Nevada 7172.002.000								
Logged By: Stephen Blakely Logged Date: October 8, 2020 Equipment: Komatsu PC228US LC								
Latitude: 39.495203° Longitude: -119.976253° Surface Elevation: 5,413'								
Depth (Feet)	Description	Depth of Test (Feet)	Moisture Content (%)	Fines Content (%)	Liquid Limit (%)	Plasticity Index (%)	Expansion Index (%)	Uncon Comp (Tsf) Field Approx.
0	Surface Conditions: Some desert pavement and varnish; subangular boulders up to 6 feet in maximum dimension							
0 - 1 1/2'	CLAYEY GRAVEL WITH SAND (GC), dark brown, very dense, slightly moist, subangular to subrounded, well-graded gravel, cobbles, and boulders to 3 feet maximum dimension, approximately 15% medium plasticity fines, approximately 15% fine- to coarse-grained sand [QUATERNARY OLDER ALLUVIUM]	1						>4.5'
1 1/2 - 6'	SILTY GRAVEL WITH SAND (GM), yellowish brown, very dense, subangular to subrounded coarse gravel, cobbles, and boulders up to 3 feet maximum dimension, approximately 15% low plasticity fines, approximately 15% fine- to coarse-grained sand							
6 - 17'	SILTSTONE, yellowish brown, strong, moderately weathered, thinly bedded, with fine to medium grained sandstone interbeds, and dm-scale tuffaceous siltstone interbeds [HUNTER CREEK FORMATION]							
17	Bottom of test pit at 17 feet. No groundwater encountered.							

TEST PIT LOG 2-TP19								
<b>TEST PIT LOG 2-TP19</b> Santerra - Quilici Properties Reno, Nevada 7172.002.000								
Logged By: Stephen Blakely Logged Date: October 9, 2020 Equipment: Komatsu PC228US LC								
Latitude: 39.491892° Longitude: -119.973157° Surface Elevation: 5,569'								
Depth (Feet)	Description	Depth of Test (Feet)	Moisture Content (%)	Fines Content (%)	Liquid Limit (%)	Plasticity Index (%)	Expansion Index (%)	Uncon Comp (Tsf) Field Approx.
0	Surface Conditions: Some desert pavement and varnish; primarily volcanic boulders up to 3 feet in maximum dimension are weathered with abundant lichens							
0 - 3 1/2'	GRAVELLY FAT CLAY (CH), dark reddish brown, hard, slightly moist, high plasticity, high toughness, approximately 30% subangular coarse gravel and boulders up to 3 feet in maximum dimension [QUATERNARY OLDER ALLUVIUM]	1						>4.5'
3 1/2 - 16 1/2'	WELL-GRADED GRAVEL WITH SAND (GW), reddish yellow, medium dense to dense, fine to coarse gravel, cobbles, and boulders up to 3 feet in maximum dimension, well-graded fine- to coarse-grained sand, trace fines	3.5	14					
7 1/2'	Grades to WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GP), approximately 10% low plasticity fines	8	17					
16 1/2'	Bottom of test pit at 16 1/2 feet. No groundwater encountered.							

DATE: July 29, 2024	HORIZ. SCALE: X	VERT. SCALE: X	DRAWN BY: SN	MUD: MUD	CHECKED BY: CC	APPROVED BY: CC	PROJECT #:
							3110.0063

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**MASS GRADING PLANS FOR  
 QUILLICI RANCH PHASE 2  
 VILLAGES 9, 10A, 10B AND 10C  
 A SINGLE FAMILY RESIDENTIAL SUBDIVISION  
 SOILS LOG (SHEET 3 OF 4)**

DATE: 07/29/2024

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DRAWING  
**B-3**  
 SHT 55 OF 56

C:\Users\blakely\OneDrive\Documents\Santerra\LOGS\2024\LOGS\2024-TP15.DWG

C:\Users\blakely\OneDrive\Documents\Santerra\LOGS\2024\LOGS\2024-TP15.DWG

ENGEO		TEST PIT LOG 2-TP51						
Santerra - Quilici Properties Reno, Nevada 7172.002.000		Logged By: Jennifer Knipper Logged Date: October 15, 2020 Equipment: Komatsu PC228US LC		Latitude: 39.494356° Longitude: -119.983346° Surface Elevation: 5,332'				
Depth (Feet)	Description	Depth of Test (Feet)	Moisture Content (%)	Fines Content	Liquid Limit	Plasticity Index	Expansion Index	Uncon Comp (Tst) Field Approx.
0 - 2	GRAVELLY FAT CLAY (CH), brown, hard, slightly moist, high plasticity, approximately 40% fine to coarse gravel, cobbles, and boulders up to 24 inches in maximum dimension, approximately 5% fine-grained sand [QUATERNARY OLDER ALLUVIUM]	1						>4.5*
2 - 11	SILTY SAND WITH GRAVEL (SM), light yellowish brown, dense, slightly moist, fine- to coarse-grained sand, approximately 20% low plasticity fines, approximately 30-40% fine to coarse gravel, cobbles, and boulders up to 18 inches in maximum dimension							
10	Grades to approximately 40% fine-grained sand							
11 - 15	INTERBEDDED CLAYSTONE, SANDSTONE, AND SILTSTONE, very dark brown, weak to medium strong, moderately to highly weathered, fine to coarse grained sandstone, closely spaced fractures [HUNTER CREEK FORMATION]	11		41%	59	22		
14	FeOx staining							
17	Bottom of test pit at 17 feet. No groundwater encountered.							

ENGEO		TEST PIT LOG 2-TP50						
Santerra - Quilici Properties Reno, Nevada 7172.002.000		Logged By: Jennifer Knipper Logged Date: October 15, 2020 Equipment: Komatsu PC228US LC		Latitude: 39.492494° Longitude: -119.982788° Surface Elevation: 5,478'				
Depth (Feet)	Description	Depth of Test (Feet)	Moisture Content (%)	Fines Content	Liquid Limit	Plasticity Index	Expansion Index	Uncon Comp (Tst) Field Approx.
0 - 3	CLAYEY GRAVEL WITH SAND (GC), brown, very dense, slightly moist, angular to subrounded coarse gravel, cobbles, and boulders up to 24 inches in maximum dimension, high plasticity fines, fine- to coarse-grained sand [QUATERNARY OLDER ALLUVIUM]	1	8					>4.5*
3 - 12	SILTY SAND WITH GRAVEL (SM), light yellowish brown, dense, slightly moist, fine-grained sand, approximately 20% low plasticity fines, approximately 40% fine to coarse gravel, cobbles, and boulders up to 24 inches in maximum dimension	3	22				101	
6	Grades to coarse gravel, cobbles, and boulders up to 16 inches in maximum dimension							
8	Grades to approximately 30% low plasticity fines, approximately 20% fine to coarse gravel, cobbles, and boulders to 16 inches in maximum dimension							
12 - 17	INTERBEDDED SILTSTONE AND SANDSTONE, light yellowish brown, very weak, highly to completely weathered, fine to coarse grained sandstone, closely spaced fractures [HUNTER CREEK FORMATION]							
17	Bottom of test pit at 17 feet. No groundwater encountered.							

ENGEO		TEST PIT LOG 2-TP22						
Santerra - Quilici Properties Reno, Nevada 7172.002.000		Logged By: Stephen Blakely Logged Date: October 9, 2020 Equipment: Komatsu PC228US LC		Latitude: 39.494104° Longitude: -119.979737° Surface Elevation: 5,395'				
Depth (Feet)	Description	Depth of Test (Feet)	Moisture Content (%)	Fines Content	Liquid Limit	Plasticity Index	Expansion Index	Uncon Comp (Tst) Field Approx.
0	Surface Conditions: Soil, no desert pavement							
0 - 5	CLAYEY GRAVEL WITH SAND (GC), brown, dense, moist, fine to coarse gravel and cobble, approximately 30% fine- to coarse-grained sand, approximately 30% medium plasticity fines [QUATERNARY OLDER ALLUVIUM]	1	14					
2 1/2	Grades to yellowish brown, medium to high plasticity fines	2.5		17%	54	28		
5 - 14	POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), yellowish brown, very dense, moist, fine- to coarse-grained sand, approximately 10% low to medium plasticity fines, approximately 30% subrounded fine to coarse gravel and cobble to 10 inches in maximum dimension							
14 - 16 1/2	POORLY GRADED SAND WITH GRAVEL (SP), yellowish brown, very dense, moist, fine- to coarse-grained sand, approximately 30% subrounded fine to coarse gravel and cobbles up to 8 inches in maximum dimension, approximately 5% low plasticity fines							
16 1/2	Bottom of test pit at 16 1/2 feet. No groundwater encountered.							

ENGEO		LOG OF BORING 2-B4B								
Geotechnical Exploration Santerra - Quilici Properties Reno, Nevada 7172.002.000		DATE DRILLED: 10/21/2020 HOLE DEPTH: Approx. 30 ft. HOLE DIAMETER: 8.0 in. SURF ELEV (MSL): Approx. 5396 ft.		LOGGED / REVIEWED BY: A. Hauger / MMG DRILLING CONTRACTOR: Cascade Drilling DRILLING METHOD: Hollow Stem Auger HAMMER TYPE: 140 lb. Auto Trip			LATITUDE: 39.493361 LONGITUDE: -119.980738			
Depth in Feet	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Liquid Limit	Plasticity Index	Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Unconfined Strength (tsf) field approx.
5370	POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), yellowish brown, very dense, moist, fine- to coarse-grained sand, medium plasticity fines, fine to coarse gravel and cobbles			52						
30	Bottom of boring at 30 feet. No groundwater encountered.			33			11			

ENGEO		TEST PIT LOG 2-TP53						
Santerra - Quilici Properties Reno, Nevada 7172.002.000		Logged By: Jennifer Knipper Logged Date: October 15, 2020 Equipment: Komatsu PC228US LC		Latitude: 39.496162° Longitude: -119.985195° Surface Elevation: 5,278'				
Depth (Feet)	Description	Depth of Test (Feet)	Moisture Content (%)	Fines Content	Liquid Limit	Plasticity Index	Expansion Index	Uncon Comp (Tst) Field Approx.
0 - 1 1/2	CLAYEY GRAVEL WITH SAND (GC), brown, dense, slightly moist, fine to coarse gravel and cobbles, high plasticity fines, approximately 30% fine- to coarse-grained sand [QUATERNARY OLDER ALLUVIUM]	1		31%	76	54		>4.5*
1 1/2 - 14	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), olive yellow, very dense, slightly moist, fine- to coarse-grained sand, low plasticity fines, approximately 30% fine to coarse gravel, cobbles (mixed lithologies), partially cemented	3		6%				
14	Bottom of test pit at 14 feet due to practical refusal. No groundwater encountered.							

ENGEO		TEST PIT LOG 2-TP52						
Santerra - Quilici Properties Reno, Nevada 7172.002.000		Logged By: Jennifer Knipper Logged Date: October 15, 2020 Equipment: Komatsu PC228US LC		Latitude: 39.494987° Longitude: -119.981514° Surface Elevation: 5,341'				
Depth (Feet)	Description	Depth of Test (Feet)	Moisture Content (%)	Fines Content	Liquid Limit	Plasticity Index	Expansion Index	Uncon Comp (Tst) Field Approx.
0 - 1	FAT CLAY WITH SAND (CH), brown, hard, slightly moist, high plasticity, approximately 20% fine-grained sand, trace subangular to subrounded coarse gravel [QUATERNARY OLDER ALLUVIUM]	1						>4.5*
1 - 5	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), light yellowish brown, dense, slightly moist, fine- to coarse-grained sand, low plasticity fines, approximately 30% fine to coarse gravel, cobbles, and angular boulders up to 24 inches in maximum dimension (volcanic)	2		7%			0	>4.5*
5 - 10	SILTY GRAVEL WITH SAND (GM), light yellowish brown, dense, moist, subangular to subrounded fine to coarse gravel, cobbles, and boulders up to 18 inches in maximum dimension (volcanic), approximately 40% fine- to coarse-grained sand, low plasticity fines	5		16%				
12	Boulders up to 30 inches in maximum dimension							
18	Bottom of test pit at 18 feet. No groundwater encountered.							

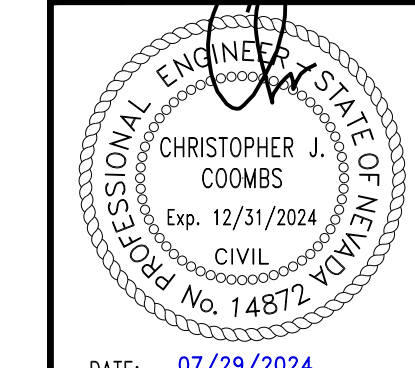
DATE	
BY	
DESCRIPTION	
REV	
DATE: July 29, 2024	X
HORIZ. SCALE:	X
VERT. SCALE:	X
DRAWN BY:	SN
DESIGNED BY:	MJD
CHECKED BY:	CC
APPROVED BY:	CC
PROJECT #:	3110.0653

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**VILLAGES 9, 10A, 10B AND 10C**  
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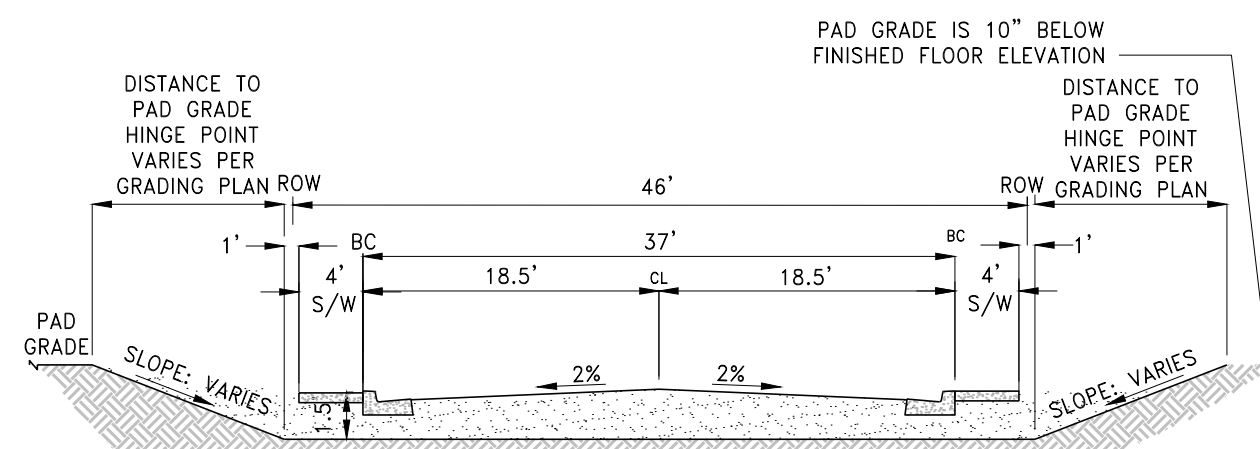
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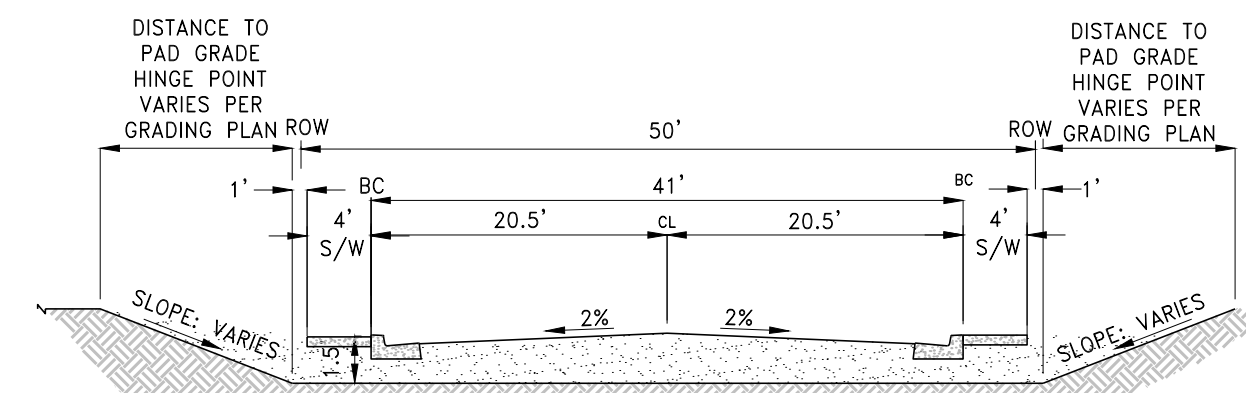
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**B-4**  
SHT 56 OF 56

LOG: GEOTECHNICAL WILEY\_SANTEIRA\_QUILICI\_PROPERTIES\_BORING\_LOGS.dwg | ENGEO INC. | 11/29/20

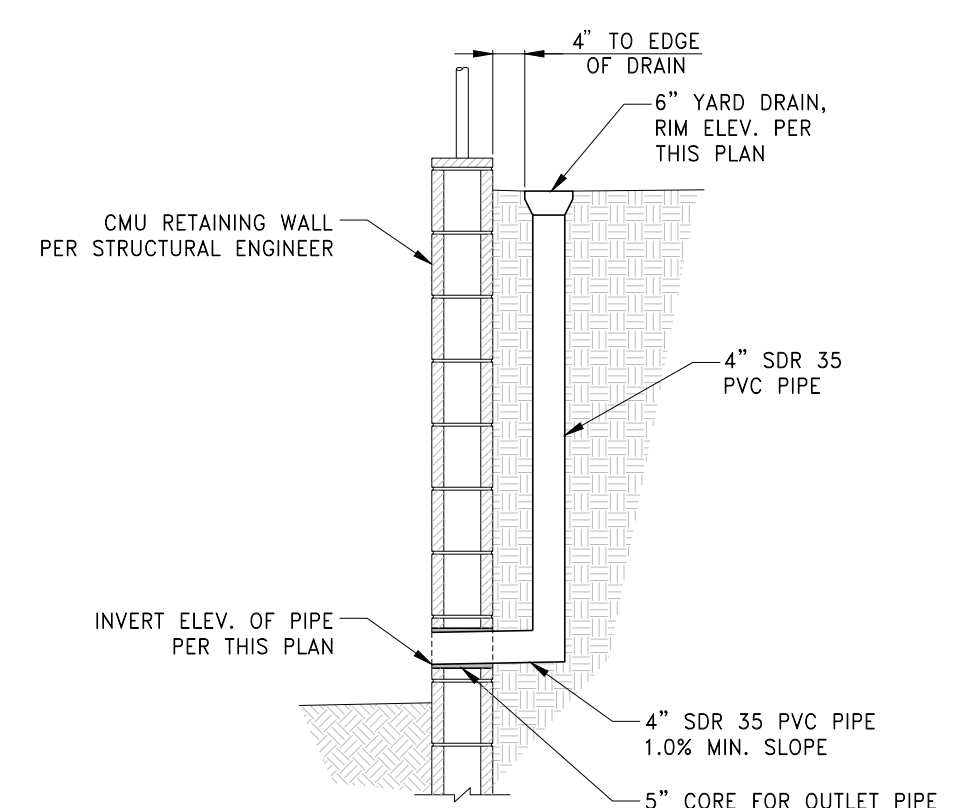
C:\3110\_Toll\0053\_Quilici\_Ranch\_Phase 2\CIVIL\PIPS\_MASS GRADING\3005\_B01\_OR\_CIVIL\PIPS\_MASS GRADING\3005\_B01\_OR\_PHS-MG.dwg | mpaatla | 7/29/24 | 10:15am



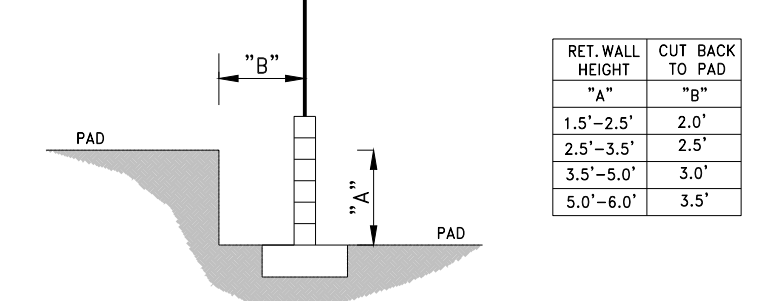
FUTURE PUBLIC 46' STREET  
ROUGH GRADE CUT SECTION SCALE: NTS 1/8"=1'-0"



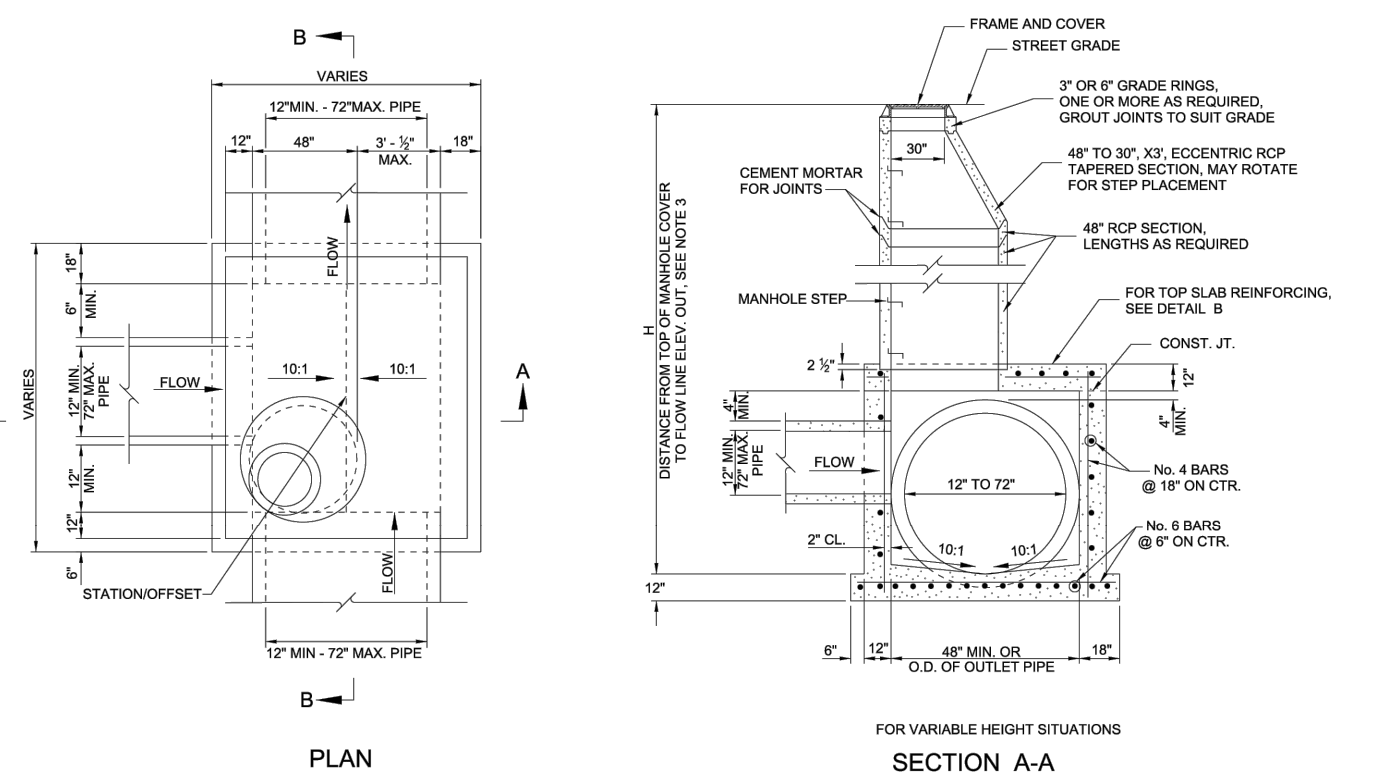
FUTURE PUBLIC 50' STREET  
ROUGH GRADE CUT SECTION SCALE: NTS 1/8"=1'-0"



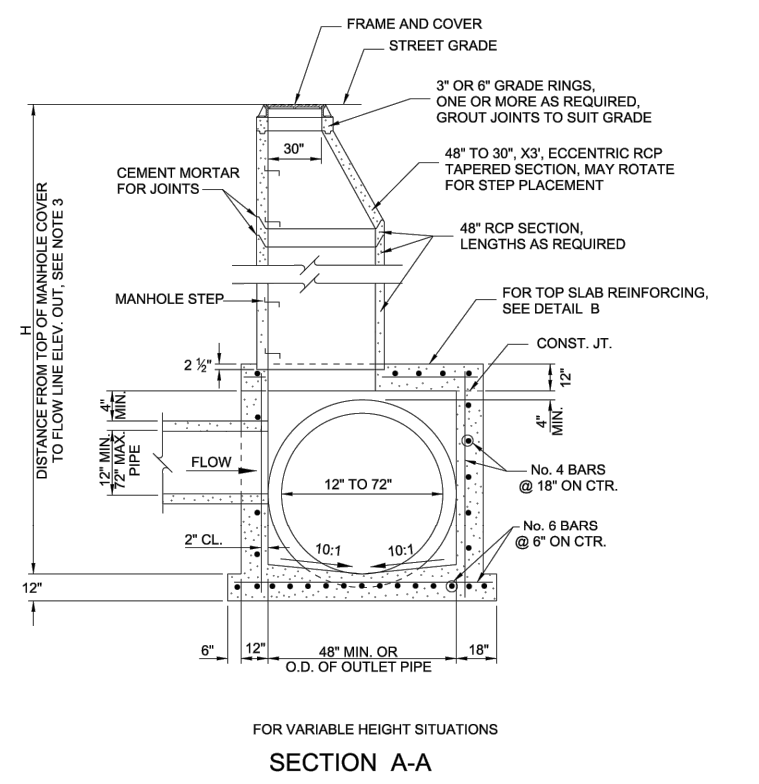
WALL DRAIN DETAIL SCALE: NTS 1/8"=1'-0"



WALL GRADE CUT BACK SECTION SCALE: NTS 1/8"=1'-0"

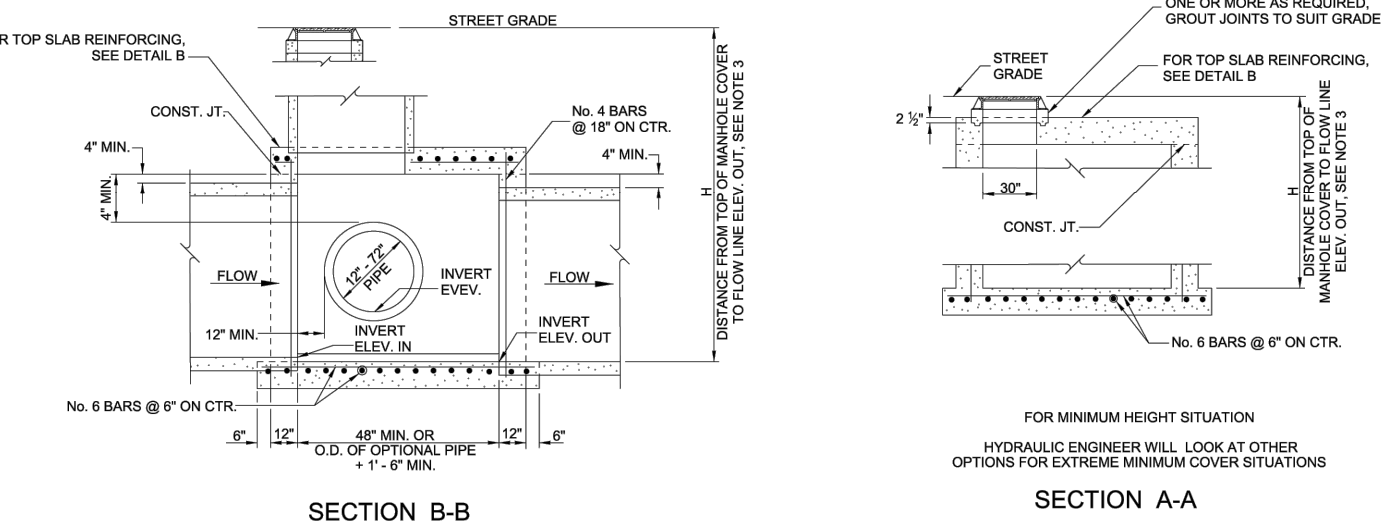


PLAN

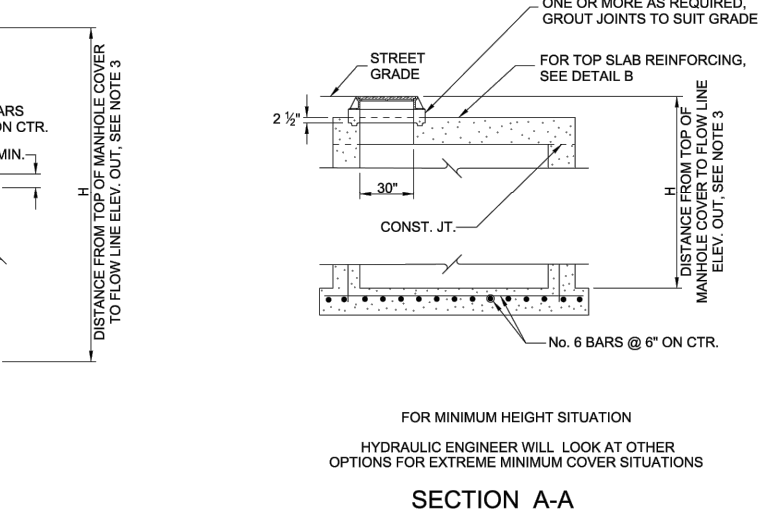


SECTION A-A

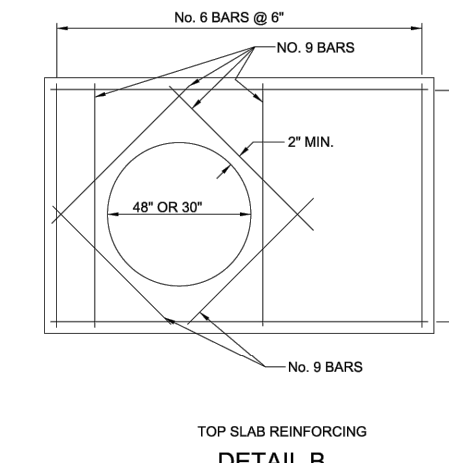
- NOTES:
- All concrete shall be class A or AA.
  - Reinforcing steel shall be confirmed with maximum spacing of 18 inches and 2 inches clear of surface of concrete except at base. Bar ends shall be lap 1/3 length clear of surface of concrete. Reinforcing bars may be cut and bent in field.
  - For values of "L", use plans. "L" is the difference in elevation between the outflow pipe invert elevation and the top of manhole elevation at street grade.
  - Provide concrete pipe sections, tapered sections, full grade rings, bases, and access shall conform to AASHTO M 161, ASTM C-478.
  - Manhole cover shall bear entity identification and system location, if applicable.
  - Grade flowline in manhole to outlet pipe, and provide a 10:1 slope from all directions toward flow line.
  - Refer to detail DS-27 for details if connecting to HDPE pipe.



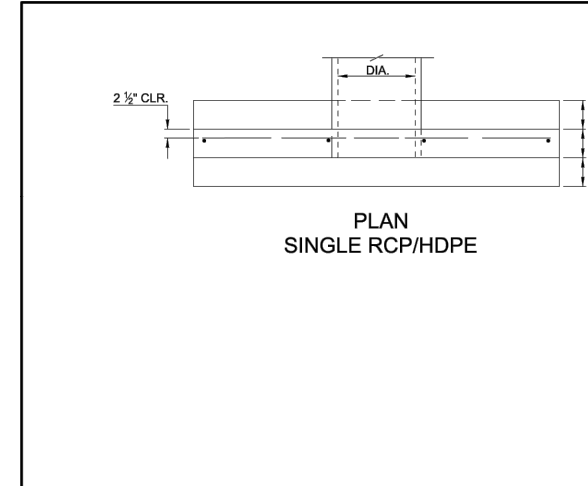
SECTION B-B



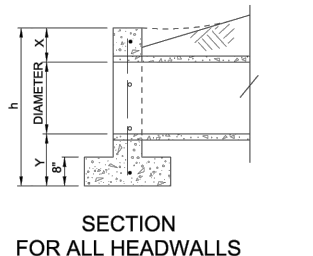
SECTION A-A



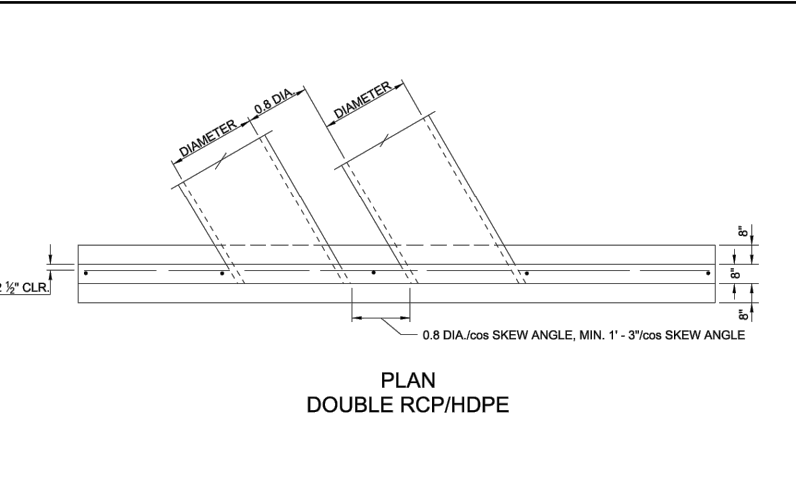
TOP SLAB REINFORCING DETAIL B



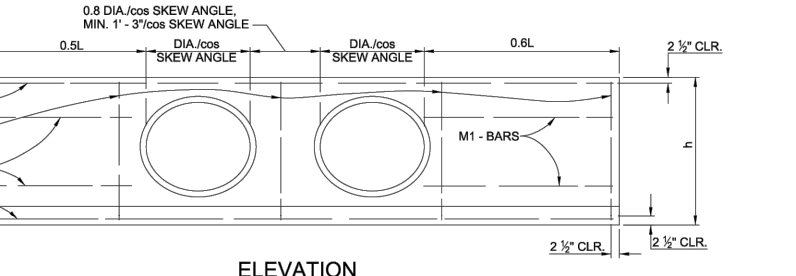
PLAN SINGLE RCP/HDP



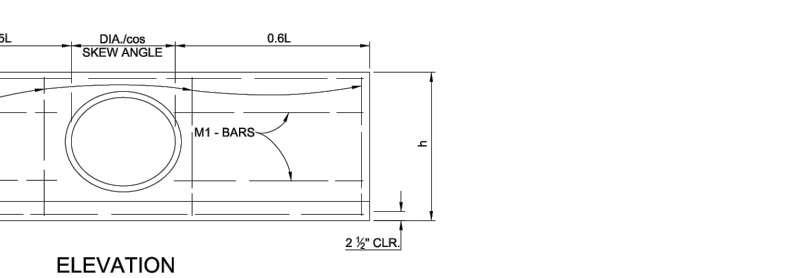
SECTION FOR ALL HEADWALLS



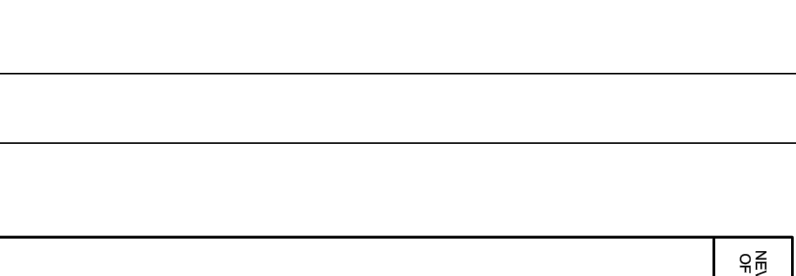
PLAN DOUBLE RCP/HDP



ELEVATION DOUBLE RCP/HDP



ELEVATION SINGLE RCP/HDP 0° SKEW



ELEVATION SINGLE RCP/HDP 15° TO 45° SKEW

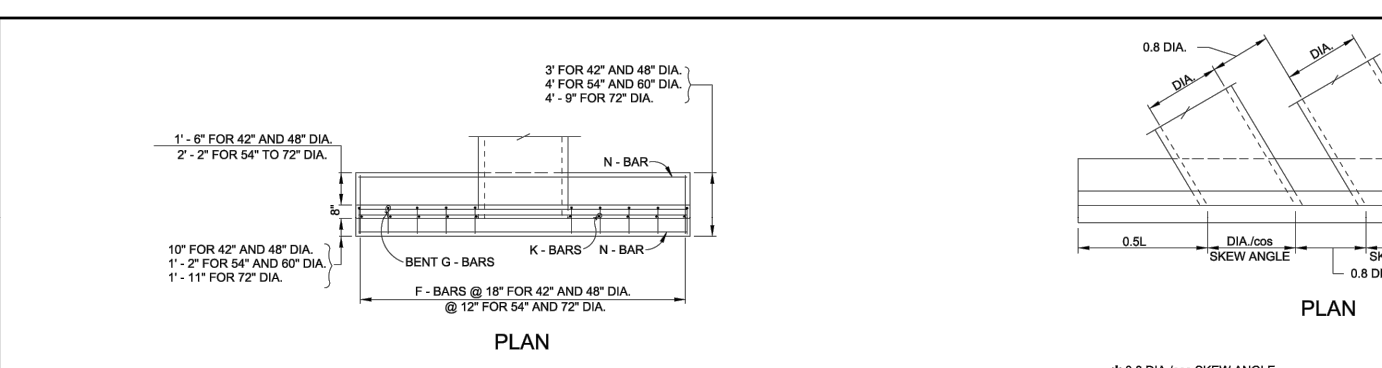
QUANTITIES SHOWN BELOW ARE FOR ONE HEADWALL

RCP/HDP PIPE	LENGTH OF HEADWALLS											
	SINGLE RCP/HDP				DOUBLE RCP/HDP				DOUBLE RCP/HDP			
NO. 4	NO. 5	NO. 6	NO. 8	NO. 4	NO. 5	NO. 6	NO. 8	NO. 4	NO. 5	NO. 6	NO. 8	
12"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
15"	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
18"	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
21"	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
24"	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
27"	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
30"	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
36"	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	

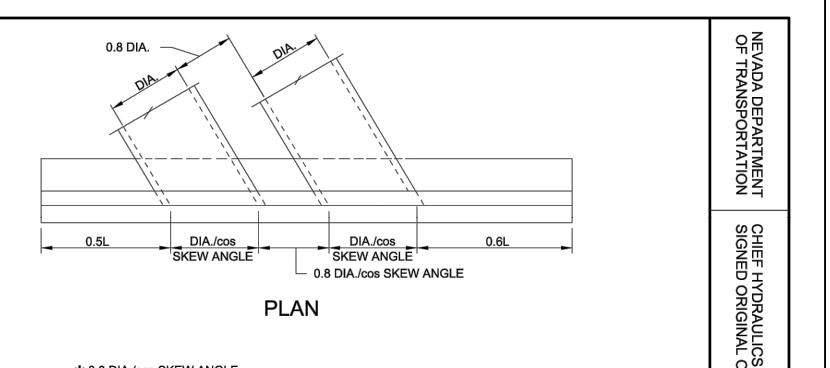
QUANTITIES SHOWN BELOW ARE FOR TWO HEADWALLS

RCP/HDP PIPE	LENGTH OF HEADWALLS											
	SINGLE RCP/HDP				DOUBLE RCP/HDP				DOUBLE RCP/HDP			
NO. 4	NO. 5	NO. 6	NO. 8	NO. 4	NO. 5	NO. 6	NO. 8	NO. 4	NO. 5	NO. 6	NO. 8	
12"	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
15"	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
18"	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
21"	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
24"	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
27"	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
30"	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
36"	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	

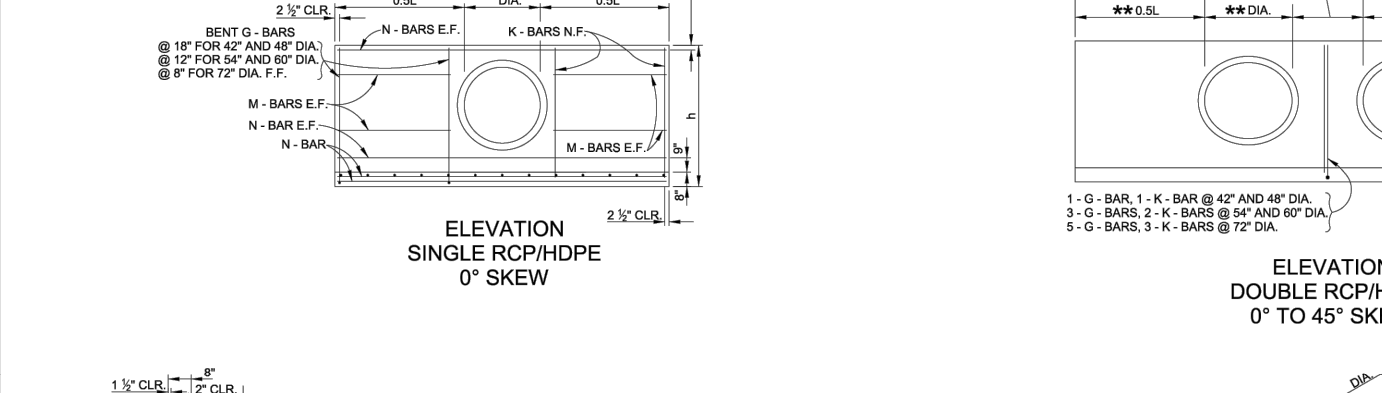
- NOTES:
- Concrete shall be class A or AA.
  - Reinforcing steel shall be confirmed with maximum spacing of 18 inches and 2 inches clear of surface of concrete except at base. Bar ends shall be lap 1/3 length clear of surface of concrete. Reinforcing bars may be cut and bent in field.
  - Footings shown are of minimum depth and shall be extended 6 inches minimum to base of soil.
  - Culvert pipes to be set on a skew shall be installed when headwalls are constructed. When headwalls are not constructed the pipes shall not be installed except in overhead section.
  - For retaining headwall quantities on skewed culverts: 0° to 15° - use quantities for 0° skew; 15° to 30° - use quantities for 15° skew; 30° to 45° - use quantities for 30° skew; 45° to 60° - use quantities for 45° skew; 60° to 75° - use quantities for 60° skew; 75° to 90° - use quantities for 90° skew. Culverts should be installed on 3° increments where it is feasible.
  - Dimensions X, Y, L, and H to remain constant regardless of pipe diameter to meet Footings due to class of pipe class.
  - See detail DS-27 for details if connecting to HDPE pipe.



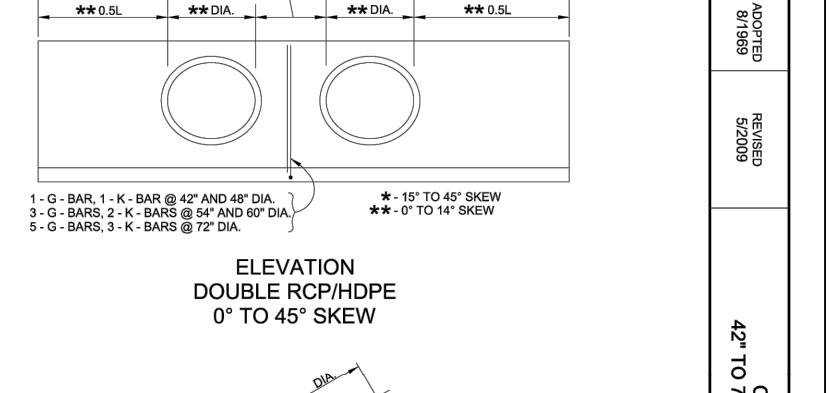
PLAN SINGLE RCP/HDP 0° SKEW



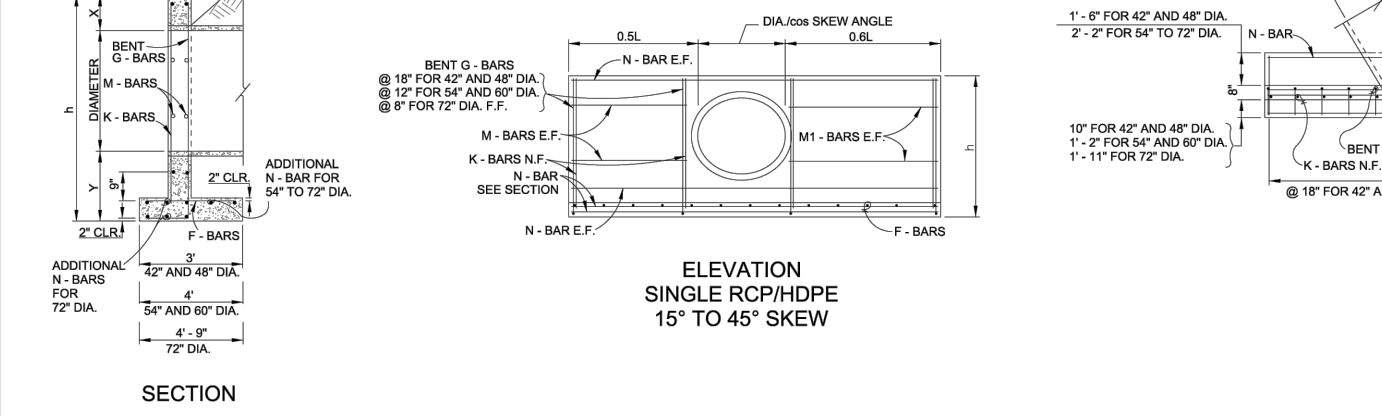
PLAN DOUBLE RCP/HDP 0° TO 45° SKEW



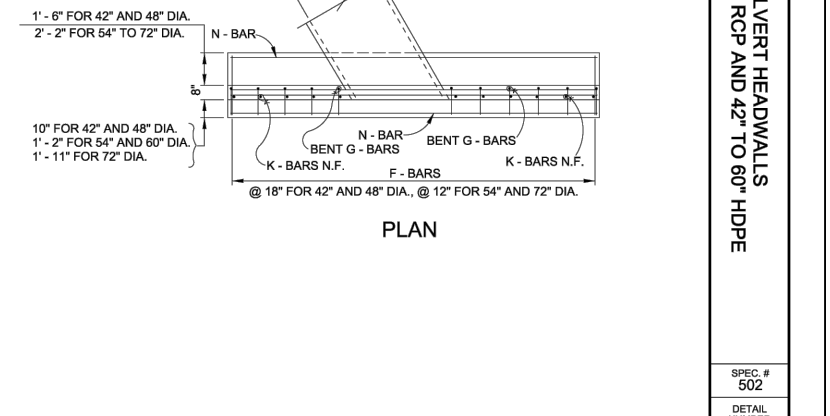
ELEVATION SINGLE RCP/HDP 0° SKEW



ELEVATION DOUBLE RCP/HDP 0° TO 45° SKEW



ELEVATION SINGLE RCP/HDP 15° TO 45° SKEW



ELEVATION DOUBLE RCP/HDP 15° TO 45° SKEW

QUANTITIES SHOWN BELOW ARE FOR ONE HEADWALL

RCP/HDP PIPE	LENGTH OF HEADWALLS											
	SINGLE RCP/HDP				DOUBLE RCP/HDP				DOUBLE RCP/HDP			
NO. 4	NO. 5	NO. 6	NO. 8	NO. 4	NO. 5	NO. 6	NO. 8	NO. 4	NO. 5	NO. 6	NO. 8	
12"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
15"	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
18"	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
21"	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
24"	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
27"	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
30"	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
36"	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	

QUANTITIES SHOWN BELOW ARE FOR TWO HEADWALLS

RCP/HDP PIPE	LENGTH OF HEADWALLS											
	SINGLE RCP/HDP				DOUBLE RCP/HDP				DOUBLE RCP/HDP			
NO. 4	NO. 5	NO. 6	NO. 8	NO. 4	NO. 5	NO. 6	NO. 8	NO. 4	NO. 5	NO. 6	NO. 8	
12"	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
15"	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
18"	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
21"	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
24"	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
27"	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
30"	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
36"	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	

- NOTES:
- Concrete shall be class A or AA.
  - Reinforcing steel shall be confirmed with maximum spacing of 18 inches and 2 inches clear of surface of concrete except at base. Bar ends shall be lap 1/3 length clear of surface of concrete. Reinforcing bars may be cut and bent in field.
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  - Dimensions X, Y, L, and H to remain constant regardless of pipe diameter to meet Footings due to class of pipe class.
  - See detail DS-27 for details if connecting to HDPE pipe.

DATE	BY	DESCRIPTION
JULY 29, 2024	X	VERT. SCALE
	X	VERT. SCALE
	SN	DRAWN BY
	MJD	DESIGNED BY
	CC	CHECKED BY
	CC	APPROVED BY
		PROJECT #

DATE: JULY 29, 2024  
 HORIZ. SCALE: X  
 VERT. SCALE: X  
 DRAWN BY: SN  
 DESIGNED BY: MJD  
 CHECKED BY: CC  
 APPROVED BY: CC  
 PROJECT #: 3110.0653

**TOLL BROTHERS**  
 1045 WEST WASHINGTON BLVD. SUITE 200  
 RENO, NEVADA 89521  
 PH: 775.850.2417  
**RCI ENGINEERING**  
 10765 DOUBLE B BLVD. SUITE 205 RENO, NEVADA 89521  
 PH: 775-800-1660 FAX: 702-453-0801  
 www.rcieng.com

MASS GRADING PLANS FOR  
**QUILLICI RANCH PHASE 2**  
**VILLAGES 9, 10A, 10B AND 10C**  
**A SINGLE FAMILY RESIDENTIAL SUBDIVISION**  
 GRADING DETAIL (SHEET 1 OF 1)

CITY OF RENO  
 42' TO 72' RCP AND 42' TO 60' HDPE  
 CIVIL ENGINEER  
 CHRISTOPHER J. COOMBS  
 Exp. 12/31/2024  
 CIVIL  
 No. 14872  
 DATE: 07/29/2024

DRAWING  
**D-1**  
 SHT 52 OF 56