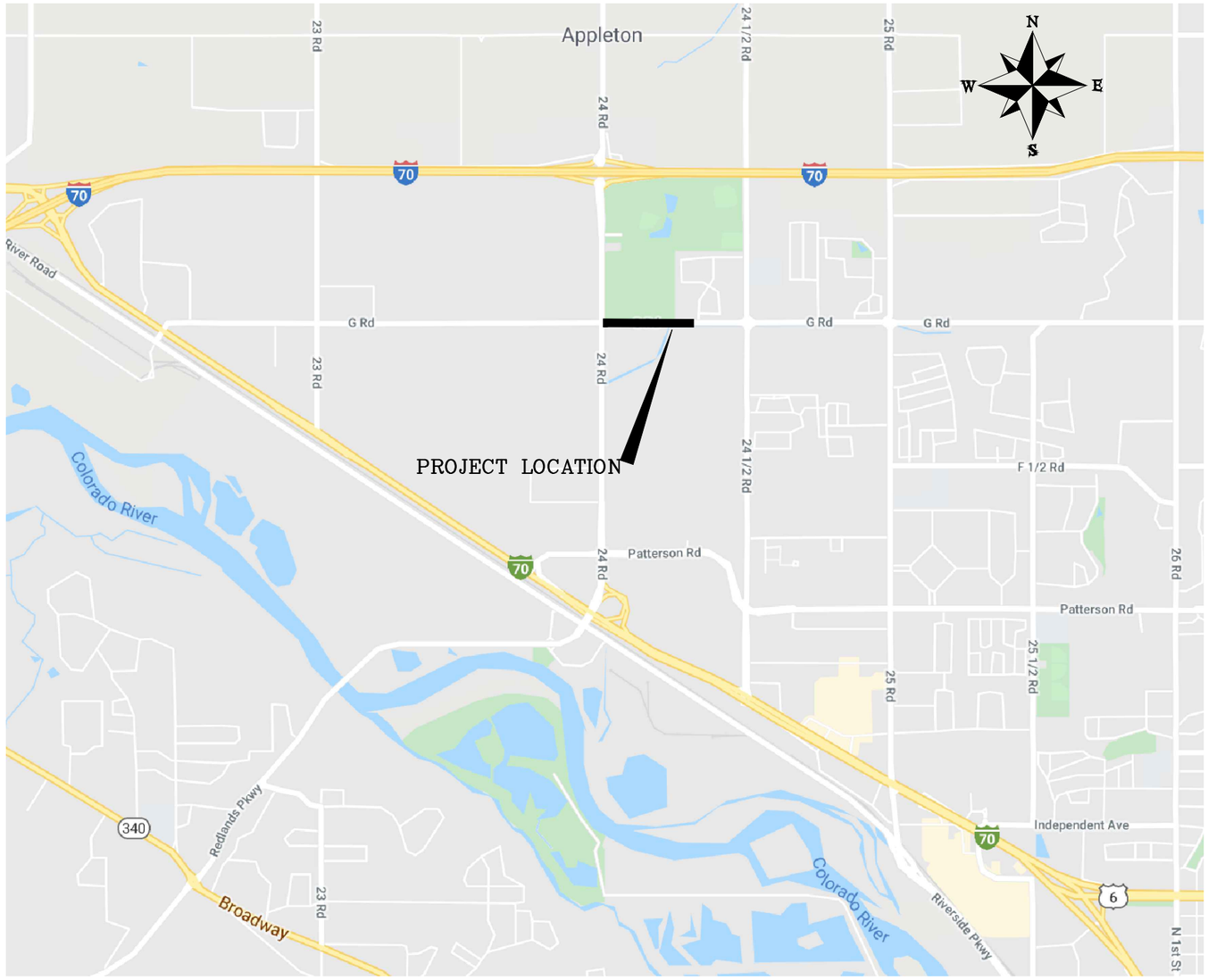
PROJECT NO.207-F1903L

CITY OF GRAND JUNCTION
G ROAD BRIDGE REPLACEMENT PROJECT
April 29, 2021



VICINITY MAP

0 1250 2500

Sheet Index

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE COVER SHEET WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

	DESCRIPTION	DATE
REVISION 1	REV. 1	DATE
REVISION 2	REV. 2	DATE
REVISION 3	REV. 3	DATE
REVISION 4	REV. 4	DATE

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

CITY OF Grand Junction COLORADO

Public Works
Engineering Division

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\COVER.dwg, 4/29/2021 8:35:37 AM

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
ABC	AGGREGATE BASE COURSE
AC	ASBESTOS CEMENT
AP	ANGLE POINT
ASB	ANCHORED STRAW BALES
ASP	ALUMINIZED STEEL PIPE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BACK OF CURB
BF	BUTTERFLY VALVE
BOW	BACK OF WALK
BCR	BEGIN CURB RETURN
BOT	BOTTOM
BSWMP	BETTER STORM WATER MANAGEMENT PRACTICES
CH	CHORD
CAP	CORRUGATED ALUMINUM PIPE
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CI	CAST IRON
C,G,& SW	CURB, GUTTER & SIDEWALK
℄	CENTER LINE
CL	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
COMB	COMBINATION (AS IN STORM SEWER AND SANITARY SEWER)
CONC	CONCRETE
CSM	CITY SURVEY MONUMENT
CSP	CORRUGATED STEEL PIPE
CU	COPPER
DI	DUCTILE IRON
DWY	DRIVEWAY
E	ELECTRIC
ECR	END CURB RETURN
EG	EDGE OF GUTTER
EL	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
FB	FULL BODY
FC	FACE OF CURB
FG	FINISHED GRADE
℄	FLOW LINE
FL	FLANGE
FM	FORCE MAIN
FO	FIBER OPTICS
FS	FAR SIDE
FTG	FOOTING
G	GAS
GB	GRADE BREAK
GM	GAS METER
GV	GATE VALVE
HBP	HOT BITUMINOUS PAVEMENT
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
IRR	IRRIGATION
L	LENGTH OF ARC
LC	LONG CHORD
LF	LINEAR FEET
LL	LONG ARC
LS	SHORT ARC
LT	LEFT
MB	MAILBOX
MCSM	MESA COUNTY SURVEY MONUMENT
MH	MANHOLE
MJ	MECHANICAL JOINT
MW	MILL WRAP
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NOP	NO ONE PERSON
NRCP	NON-REINFORCED CONCRETE PIPE
NS	NEAR SIDE
NTS	NOT TO SCALE
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PE	POLYETHYLENE
PERF	PERFORATED
PI	POINT OF INTERSECTION
PIP	PLASTIC IRRIGATION PIPE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RG	RESTRAINED GLANDS
RL	LONG RADIUS
ROW	RIGHT OF WAY
RP	RADIUS POINT
RR	RAIL ROAD
RS	SHORT RADIUS
RT	RIGHT
S	SLOPE
SAN	SANITARY
SC	SHORT CHORD
SCD	STANDARD CONTRACT DOCUMENTS
SCH	SCHEDULE
SF	SILT FENCE
SL	SECTION LINE
SSRB	STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION
SSUU	STANDARD SPECIFICATIONS FOR CONSTRUCTION OF UNDERGROUND UTILITIES
STA	STATION
STL	STEEL
STM	STORM
T	TELEPHONE
TAN	LENGTH OF TANGENT
TC	TOP OF CURB
TH	TEST HOLE
TV	TELEVISION
(TYP)	TYPICAL
UU	UNDERGROUND UTILITIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VPC	VERTICAL POINT OF CURVATURE
VPCC	VERTICAL POINT OF COMPOUND CURVATURE
VPRC	VERTICAL POINT OF REVERSE CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WATER
△	DELTA ANGLE

LEGEND

BSWMP DRAINAGE BASIN BOUNDARY

BSWMP ANCHORED STRAW BALES — ASB ASB ASB ASB ASB ASB ASB

BSWMP SILT FENCE — SF SF SF SF SF SF SF

BUILDING

CONCRETE CURB AND GUTTER — 2' CURB AND GUTTER

7' C, G, & SW

CONCRETE CURB,GUTTER, & SIDEWALK

CONCRETE DITCH — CONCRETE

CONCRETE SIDEWALK — 4' SW

CULVERT — 18" RCP

EARTH DITCH — EARTH EARTH EARTH

EDGE OF GRAVEL

EDGE OF PAVEMENT

FENCE (HT & MATL NOTED) — 6' CHAINLINK

GUARD RAIL

HATCHING: INDICATES ASPHALT REMOVAL

HATCHING: INDICATES CONCRETE REMOVAL

HATCHING: INDICATES STAGING AREA — ~STAGING AREA~

LINE (CENTER OF IMPROVEMENTS) — CENTERLINE

LINE (CITY LIMITS) — CITY LIMITS

LINE (CONTROL) — CONTROL LINE

LINE (EASEMENT)

LINE (MONUMENT/SECTION) — MONUMENT/SECTION LINE

LINE (PROPERTY)

LINE (RIGHT OF WAY)

MATCH LINE — MATCH LINE

PIPE (IRRIGATION) — 4" IRR

PIPE (SIPHON) — 4" SIPHON

PROPOSED CONCRETE CURB AND GUTTER

PROPOSED CONCRETE CURB,GUTTER,& SIDEWALK

PROPOSED CONCRETE SIDEWALK

PROPOSED "WET" UTILITIES (CONSTRUCTION NOTE WILL INDICATE TYPE, SIZE, AND MATERIAL OF NEW MAIN) — 8" PVC SANITARY SEWER

ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE SHOWN THE SAME AS THEIR EXISTING COUNTERPART, BUT INDICATED BY BOLDER LINETYPE

RAIL ROAD

RETAINING WALL — 1' RETAINING WALL

STRIPING (CONTINUOUS WHITE) — WHITE

STRIPING (DASHED WHITE) — WHITE

STRIPING (CONTINUOUS YELLOW) — YELLOW

STRIPING (DASHED YELLOW) — YELLOW

TOP OF SLOPE — 4580

CONTOUR LINES (SHOWN BETWEEN TOP & TOE)

TOE OF SLOPE — 4570

TRAFFIC DETECTOR LOOP

UTILITY LINE (ABANDON) (THIS CASE A WATER LINE) — W (ABANDONED) 8" W

UTILITY LINE (CABLE TV) — TV TV

UTILITY LINE (ELECTRIC) — E E

UTILITY LINE (FIBER OPTIC) — FO QWEST FO

UTILITY LINE (GAS) — G 1 1/4" MW G

UTILITY LINE (HIGH VOLTAGE OVERHEAD POWER) — HVOHP

UTILITY LINE (OVERHEAD POWER) — OHP

UTILITY LINE (OVERHEAD TELEPHONE) — OHT

UTILITY LINE (SANITARY SEWER) — 8" SAN

UTILITY LINE (SANITARY SEWER FORCE MAIN) — 8" FM

UTILITY LINE (SANITARY SEWER SERVICE) — SS

UTILITY LINE (STORM SEWER) — 8" STM

UTILITY LINE (STORM SEWER, PERFORATED) — 6" PERF

UTILITY LINE (STORM/SANITARY SEWER SEWER COMBINATION) — 18" COMB

UTILITY LINE (TELEPHONE) — T T

UTILITY LINE (WATER) — W 8" W

SYMBOLS

BENCH MARK — A

CATCH BASIN

CLEAN OUT — SSCO

CURB STOP

FIRE HYDRANT

GUY WIRE ANCHOR

HEADGATE

IRRIGATION PUMP

MAILBOX — MB

MANHOLE (ELECTRIC) — E

MANHOLE (GAS) — G

MANHOLE (SANITARY/STORM)

MANHOLE (TELEPHONE) — T

MANHOLE (TV) — tv

MANHOLE (WATER) — W

METER (GAS) — GM

METER (WATER)

PEDESTAL (TELEPHONE)

PEDESTAL (TV) — TV

PROPERTY PIN — PIN

PULL BOX

REDUCER FITTING

SIGN OR POST (SIGN TYPE NOTED) — STOP

SPRINKLER HEAD

STREET LIGHT

SURVEY MONUMENT (CITY) — CSM

SURVEY MONUMENT (TYPE NOTED) — MCSM

TEST HOLE — TH #1

TRAFFIC PAINT MARKING

TRAFFIC SIGNAL POLE AND MAST ARM

UTILITY POLE

VALVE (GAS) — GV

VALVE (IRRIGATION) — IRR

VALVE (WATER)

VEGETATION (HEDGE OR BUSH)

VEGETATION (TREE STUMP)

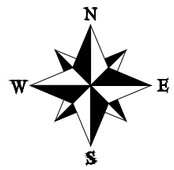
VEGETATION (TREE) (CALIPER SIZE NOTED) — 6"

WATER HYDRANT — WH

WEIR

YARD LIGHT

NORTH ARROW:



BAR SCALE:

GRAPHIC SCALE

10 0 20 60

(IN FEET)
1 inch = 20 ft.

DESCRIPTION	DATE
REVISION ⚠1 REV 1	DATE
REVISION ⚠2 REV 2	DATE
REVISION ⚠3 REV 3	DATE
REVISION ⚠4 REV 4	DATE

DRAWN BY	JCS	DATE	2022
DESIGNED BY	JCS	DATE	2022
CHECKED BY	ALC	DATE	2022
APPROVED BY	TCP	DATE	2022

SEE PLAN FOR SCALE INFO

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
STANDARD ABREVIATIONS LEGENDS AND SYMBOLS

2

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\STANDARD ABREVIATIONS LEGENDS AND SYMBOLS PH 1.dwg, 4/23/2021 6:37:21 AM

Item No.	CDOT, City Ref.	Description	Quantity	Units
1	108.2	Water Main (6") (C-900 PVC, DR-18)	30.	Lin. Ft.
2	108.2	Water Main (8") (C-900 PVC, DR-18) (Includes cost of MJ Solid Sleeve Coupling with Restraints or Engineer Approved Equal for connection into existing pipe)	1,640.	Lin. Ft.
3	108.2	Water Main (8") (C-900 PVC, DR-18) (Restrained) (RieborLok Restrained Gasket Assembly) (Station 0+03 to 1+56 and)	215.	Lin. Ft.
4	108.2	Water Main (10") (C-900 PVC, DR-18) (Includes cost of MJ Solid Sleeve Coupling with Restraints or Engineer Approved Equal for connection into existing pipe)	20.	Lin. Ft.
5	108.2	10" Gravity Sewer Pipe (SDR-35 PVC) (Includes cost of connection to existing sewer pipe)	370.	Lin. Ft.
6	108.2	12" Storm Drain Pipe (SDR-35 PVC or PIP) (Includes cost to core into the existing storm drain inlet box and the cost of connection)	107.	Lin. Ft.
7	108.2	18" Storm Drain Pipe (Corrugated HDPE)	101.	Lin. Ft.
8	108.2	30" Storm Drain Pipe (RCP, Class II)	365.	Lin. Ft.
9	108.2	30" Culvert End Section (Flared RCP)	1.	Each
10	108.2	Imported Trench Backfill (Class 3) (Including haul and disposal of unsuitable excavated material) (Assumed Unit Weight = 133 lbs/cu.ft.)	2,500.	Ton
11	108.3	Gate Valve (6") (MJ)	1.	Each
12	108.3	Gate Valve (8") (MJ)	1.	Each
13	108.3	Gate Valve (10") (MJ)	2.	Each
14	108.3	Tee (8" x 4") (MJ x FL) (Epoxy Coated) (For use in Air Release Valve Assembly)	2.	Each
15	108.3	Tee (8" x 6") (MJ x FL) (Epoxy Coated)	1.	Each
16	108.3	Tee (10" x 8") (FL) (Epoxy Coated)	1.	Each
17	108.3	Elbow (8" x 45 deg) (MJ) (Epoxy Coated)	8.	Each
18	108.3	Blind Flange (8") (Includes Concrete Thurstblock) (To be used in 24 & G Road Intersection to abandon existing water pipe)	1.	Each
19	108.3	30" End Cap/Plug (For Use on RCP Storm Pipe)	1.	Each
20	108.3	Fire Hydrant Assembly	1.	Each
21	108.4	Water Service Line (3/4") (Type K Copper) (Includes cost of connection to existing drinking fountain assembly at park shelter)	260.	Lin. Ft.
22	108.4	Tapping Saddle (8" x 3/4")	3.	Each
23	108.4	Corporation Stop (3/4")	3.	Each
24	108.4	3/4" Meter Setter (Install Only) (Ute Water will provide Compression Connection, Meter Yoke, and FIP Outlet Connection per Ute Water Domestic Service Detail)	2.	Each
25	108.4	Meter Pit (Install Only) (Ute Water will provide new Meter Pit and Cast Iron Cone with Frost Lid per Ute Water Domestic Service Detail)	2.	Each
26	108.4	Air Release Valve Assembly (Assembly includes: 4" x 2" Companion Flange, 2" Nipple, 2" Ball Valve, 2" x 1" Bushing, and 1" Val-Matic 201C.2 Combo Air Valve per Ute Water's Std. Air Release Valve Detail)	2.	Each
27	108.5	Air Release Vault Assembly (Assembly includes: 48" I.D. Vault, 8" Thick x 8' Long x 8" Wide Grade Beams, 4" SCH. 40 Welded Steel Air Vent Pipe with Mesh Screen, 30" Manhole Cover with Frost Lid, and painted vent pipe per Ute Water's Std. Air Release Valve Detail)	2.	Each
28	108.5	Sanitary Sewer Basic Manhole (48" I.D.) (Includes Manhole Waterproofing, HDPE grade rings, MH-310-24 CI covers, and concrete collars in unpaved areas per City Std. Detail SS-05)	2.	Each
29	108.5	Sanitary Sewer Basic Drop Manhole (48" I.D.) (Includes Manhole Waterproofing and Manhole Corrosion Protection as per Section 102.11, HDPE grade rings, MH-310-24 CI covers, and concrete collars in unpaved areas per City Std. Detail SS-05) (See Special Provision for Manhole Corrosion Protection)	1.	Each
30	108.5	Sanitary Sewer Basic Manhole (48" I.D.) (Cast-in-Place Base Manhole) (Existing Sewer Pipe is 12" PVC Pipe) (24 Road) (Includes Manhole Waterproofing, HDPE grade rings, and MH-310-24 CI cover) (See City Std. Detail SS-02)	1.	Each
31	108.5	Storm Sewer Basic Manhole (48" I.D.) (Includes Manhole Waterproofing)	1.	Each
32	108.5	Storm Sewer Basic Manhole (60" I.D.) (Includes Manhole Waterproofing)	4.	Each
33	108.5	Manhole Barrel Section (D>5') (48" I.D.) (Includes Manhole Waterproofing)	17.	Vert. Ft.
34	108.5	Drop Manhole Barrel Section (D>5') (48" I.D.) (Includes Manhole Waterproofing and Manhole Corrosion Protection)	8.	Vert. Ft.
35	108.5	Manhole Barrel Section (D>5') (60" I.D.) (Includes Manhole Waterproofing)	10.	Vert. Ft.
36	108.6	Double Storm Drain Inlet (Concrete Box Only) (No Frame & Grate Assembly) (Includes steel plate with dimensions equal to or greater than 78" long x 30" wide x 5/8" thick)	2.	Each
37	108.7	Granular Stabilization Material (Type B) (18" Thick Min.) (Includes haul and disposal of unsuitable excavated material) (Assumed Unit Weight = 136 lbs/cu.ft.)	600.	Ton
38	202	Clearing and Grubbing (Includes Trees, Bushes, and Sod Removal)	1.	Lump Sum
39	202	Removal of Bridge	1.	Lump Sum
40	202	Removal of Sign	3.	Each
41	202	Removal of Steel Posts	14.	Each
42	202	Removal of Manhole (Storm & Sewer)	3.	Each
43	202	Removal of Storm Inlet	1.	Each
44	202	Removal of Concrete Irrigation Ditch	2,150.	Lin. Ft.
45	202	Removal of Water Service	1.	Each
46	202	Removal of Water Valve	2.	Each
47	202	Removal of Pipe (Sewer, Water, Storm) (Various Pipe Materials)	1,100.	Lin. Ft.
48	202	Removal of Abandoned Utilities and Conduits (Includes abandoned gas, power, and communication utilities and utility boxes)	1,000.	Lin. Ft.
49	202	Removal of Concrete (Includes, but not limited to, curb, gutter, sidewalk, driveway, slabs, V-pans, curb ramps, intersection corners, aprons, landscape borders, and concrete walls)	400.	Sq. Yd.
50	202	Abandon Pipe (Abandon pipe by plugging ends with concrete)	6.	Each
51	202	Removal of Asphalt Mat (Full Depth) (6" Thick)	2,515.	Sq. Yd.
52	202	Removal of Fence	1,300.	Lin. Ft.
53	202	Abandon Well (Monitoring Wells) (Use Flowable Grout to Abandon Well Pipe)	3.	Each

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\SUMMARY OF APPROXIMATE QUANTITIES PH 1.dwg, 4/23/2021 6:37:22 AM

DESCRIPTION	DATE
REVISION ⚠ REV_1	– DATE
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REVISION ⚠ REV_3	– DATE
REVISION ⚠ REV_4	– DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

NO SCALE

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
SUMMARY OF APPROXIMATE QUANTITIES
PH 1 – 1

54	203	Unclassifed Excavation (Channel Grading) (Complete in Place)	2,500.	Cu. Yd.
55	203	Muck Excavation (North Leach Creek)	3,250.	Cu. Yd.
56	203	Compaction (AASHTO T 99)	136.	Cu. Yd.
57	203	Potholing (As deemed necessary)	10.	Each
58	206	Structure Excavation	6,828.	Cu. Yd.
59	206	Structure Backfill (Class 1)	3,364.	Cu. Yd.
60	206	Structure Backfill (Class 2)	236.	Cu. Yd.
61	206	Structure Backfill (Flow-Fill)	50.	Cu. Yd.
62	206	Mechanical Reinforcement of Soil	2,991.	Cu. Yd.
63	206	Filter Material (Class B)	68.	Cu. Yd.
64	206	Filter Material (Class C)	174.	Cu. Yd.
65	207	Topsoil	452.	Cu. Yd.
66	207	Stockpile Topsoil	452.	Cu. Yd.
67	207	Wetland Topsoil (North Leach Creek)	260.	Cu. Yd.
68	208	Pre-Fabricated Concrete Washout Structure	1.	Each
69	208	Erosion Log (12 Inch)	1,000.	Lin. Ft.
70	208	Pre-Fabricated Vehicle Tracking Pad	1.	Each
71	208	Storm Drain Inlet Protection (Type 2)	5.	Each
72	208	Erosion Control Management (Working Days)	130.	Day
73	211	Dewatering (Includes aquiring a CDPHE Dewatering Permit and adhereing to the discharge requirements of the State Permit)	1.	Lump Sum
74	212	Seeding (Wetlands) (See Wetlands Revegetation Plans)	0.1	Acre
75	212	Sod (Includes Soil Preparation)	1,750.	Sq. Ft.
76	212	Soil Amendment	17,050.	Sq. Ft.
77	213	1-1/2 Inch Tan Granite Mulch (3" Thick)	14,400.	Sq. Ft.
78	213	Red Crushed Granite (3" Thick)	900.	Sq. Ft.
79	213	Concrete Edger (6" Wide x 4" Thick)	125.	Lin. Ft.
80	213	Landscape Boulder	29.	Each
81	214	Temporary Irrigation	1.	Lump Sum
82	214	Deciduous Tree (1 Inch Caliper) (Rio Grande Cottonwood) (See Wetlands Revegetation Plans)	14.	Each
83	214	Deciduous Tree (2 Inch Caliper)	9.	Each
84	214	Deciduous Shrub (1 Gallon Container)	17.	Each
85	214	Deciduous Shrub (5 Gallon Container)	92.	Each
86	214	Deciduous Shrub (5 Gallon Container) (Coyote Willow) (See Wetlands Revegetation Plans)	50.	Each
87	214	Nursery Stock Deep Rooted Container (DRC #10) (Baltic Rush, Beaked Sedge) (See Wetlands Revegetation Plans)	640.	Each
88	214	Nursery Stock Deep Rooted Container (DRC #60) (Maritime Bulrush) (See Wetlands Revegetation Plans)	1,700.	Each
89	214	Evergreen Tree (Pine) (6 Foot) (Ball and Burlap)	4.	Each
90	214	Evergreen Tree (Juniper) (6 Foot) (Container)	4.	Each
91	214	Evergreen Shrub (5 Gallon Container)	18.	Each
92	214	Perennials (1 Gallon Container)	76.	Each
93	214	Ornamental Grasses (1 Gallon Container)	25.	Each
94	214	Vines (5 Gallon Container)	3.	Each
95	216	Soil Retention Blanket (Straw/Coconut) (BioNet SC150BN Erosion Control Blanket or Engineer Approved Equal)	210.	Sq. Yd.
96	304	Aggregate Base Course (Class 2)	3,864.	Cu. Yd.
97	304	Aggregate Base Course (Class 6) (8" Thick) (Pedestrian Pathway outside the limits of the Drydock System and Concrete Sidewalk at Park Shelter)	355.	Sq. Yd.
98	304	Aggregate Base Course (Class 6) (12" Thick) (G Road)	2,160.	Sq. Yd.
99	304	Aggregate Base Course (Class 6) (18" Thick) (24 Road)	141.	Sq. Yd.
100	304	Aggregate Base Course (CDOT No. 57 Concrete Aggregate)	1,656.	Cu. Yd.
101	304	Washed Rock Surface Course (Type A Pipe Bedding) (2" - 3" Thick) (30' Wide) (Surface treatment along new utility corridor)	800.	Sq. Yd.
102	401	Hot Bituminous Pavement (Patching) (G Road) (4" Thick) (Grading SX, PG 64-22) (GYR.=75) (Two 2" Lifts)	2,250.	Sq. Yd.
103	401	Hot Bituminous Pavement (Patching) (24 Road) (6" Thick) (Grading SX, PG 64-22) (GYR.=75) (Three 2" Lifts) **(T-Top)**	150.	Sq. Yd.
104	401	Cold-Mix Asphalt Patching (Temporary Patching) (3" Thick) (As deemed necessary)	100.	Sq. Yd.
105	407	Emulsified Asphalt (Tack Coat)	270.	Gallon
106	408	Link Seal	4.	Each
107	420	Geotextile (Drainage) (Class 1) (Geotextile is to be used with the channel riprap protection detail)	611.	Sq. Yd.
108	420	Geotextile (Separator) (Class 1) (Geotextile is to be used for the backfill of North Leach Creek Backfill) (See Backfill Detail)	7,134.	Sq. Yd.
109	502	Pile Tip	91.	Each
110	502	Steel Piling (HP 12x53)	4,832.	Lin. Ft.
111	504	Precast Concrete Block Retaining Wall System (Redi-Rock Ledgestone or Approved Equal) (Color = Sandstone) (Includes Cap Stone, Perforated Drain Pipe, Leveling Pad, excavation, and backfill per details)	452.	Facial Sq. Ft.
112	506	Riprap (9 Inch)	355.	Cu. Yd.
113	506	Riprap (12 Inch)	123.	Cu. Yd.
114	509	Sump Access Hatch	1.	Each
115	509	Vine Trellis (Includes painting & concrete footers per detail)	3.	Each
116	514	Pedestrian Safety Railing (Steel) (See Landscape Plans for Railing Details)	279.	Lin. Ft.
117	514	Handrailing (Steel) (Pathway Railing) (See Landscape Plans for Pathway Railing Details)	379.	Lin. Ft.
118	515	Waterproofing (Membrane)	617.	Sq. Yd.
119	517	Waterproofing (Asphalt)	434.	Sq. Yd.
120	518	Waterstop (Special)	710.	Lin. Ft.
121	518	Waterstop (6 Inch)	149.	Lin. Ft.
122	601	Sump Access Precast Riser	1.	Each
123	601	Concrete Class D (Special) (Includes Xypex Admix C-500 Waterproofing)	537.	Cu. Yd.

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\SUMMARY OF APPROXIMATE QUANTITIES PH 1.dwg, 4/23/2021 6:37:23 AM

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NO SCALE

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
SUMMARY OF APPROXIMATE QUANTITIES
PH 1 – 2

124	601	Concrete Class D (Bridge)	305.	Cu. Yd.
125	601	Structural Concrete Coating	6,748.	Sq. Ft.
126	601	Structural Concrete Coating (Anti-Graffiti)	6,748.	Sq. Ft.
127	601	Aspen Tree Artwork Concrete Foundations (Includes 4.5" dia. SCH. 40 Steel Pipe Slip Pole, 3,000 psi Concrete, Rebar Reinforcement, and Welded Slip Pole Ties) (City will install Aspen Tree Artwork into completed foundations)	12.	Each
128	602	Reinforcing Steel	86,639.	Pound
129	602	Reinforcing Steel (Epoxy Coated)	48,974.	Pound
130	604	Inlet Special (Trench Drain TD-1) (6 Inch Width) (Includes Pipe Fittings) (See Trail Drain Details)	29.	Lin. Ft.
131	604	Clean-Out Assembly (CO-1) (Includes all necessary pipe fittings) (See Trail Drain Details)	1.	Each
132	607	Barrier Fence (48" High) (Inlcudes all fencing, posts, end posts, ties, and concrete per CDOT M Standard M-607-3)	975.	Lin. Ft.
133	607	Fencing (Plastic) (Temporary Construction Fencing)	475.	Lin. Ft.
134	607	Tree Protection Zone Fencing (Includes Fencing and Signage per Details)	5.	Each
135	608	Concrete Sidewalk (6" Thick) (14' Wide) (Bridge Drydock System) (See Bridge Plans) (Includes Concrete Jointing & Concrete Joint Sealant)	523.	Sq. Yd.
136	608	Concrete Sidewalk (6" Thick) (12' Wide) (Sidewalk outside the limits of the Drydock System) (Includes Concrete Jointing & Concrete Joint Sealant)	315.	Sq. Yd.
137	608	Cap Top Half of Pipe in Concrete per City Std. Detail GU-04 (20' long)	3.	Each
138	608	Concrete Drainage Pan (2' Wide) (Includes Steel Reinforcement) (Includes Concrete Jointing & Concrete Joint Sealant)	11.	Sq. Yd.
139	608	Concrete Sidewalk (4" Thick) (Concrete at Canyon View Park Shelter)	8.	Sq. Yd.
140	608	Concrete Curb & Gutter (2'-6" Wide) (24 Road) (Match in Kind)	40.	Lin. Ft.
141	613	4 Inch Electrical Conduit (Plastic) (SCH-80) (For use on Xcel Energy's buried electric)	210.	Lin. Ft.
142	613	2 Inch Electrical Conduit (Plastic)	1,318.	Lin. Ft.
143	613	2 Inch Broadband Conduit (Plastic) (SCH-80) (Includes 10 gauge tracer wire and pull rope placed inside of conduit)	277.	Lin. Ft.
144	613	1 Inch Electrical Conduit (Plastic)	354.	Lin. Ft.
145	613	3/4 Inch Electrical Conduit (GRC)	10.	Lin. Ft.
146	613	4" Plastic Sweep Elbows (SCH-80) (For use on Xcel Energy's buried electric)	4.	Each
147	613	2" Plastic Sweep Elbows (SCH-80) (Broadband) (For use on City's broadband conduit)	4.	Each
148	613	Type One Pull Box	22.	Each
149	613	Broadband Pull Box (30" x 48" x 24") (3048 Polymer Concrete Series - Tier 22) (Split Lid) (Includes 2-3 inch thick of Pea Gravel placed within bottom of box)	1.	Each
150	613	Wiring	1.	Lump Sum
151	613	Light Standard and Luminaire (Pedestrian "SA")	14.	Each
152	613	Light Standard Foundation (Special)	14.	Each
153	613	Light Standard and Luminaire (Tunnel "SB")	1.	Each
154	613	Lighting Control Center (Special)	1.	Each
155	618	Prestressed Concrete Slab (Depth Greater than 13 Inches)	4,779.	Sq. Ft.
156	619	3 Inch SCH-40 Steel Pipe (Air Vent Pipe) (Includes welding, pipe fittings, pipe gooseneck fitting with #24 stainless steel mesh screen cap and vent pipe painted Dunes Tan) (See Trail Drain Details)	14.	Lin. Ft.
157	619	20" Steel Casing Pipe (Open Trench Installation) (1/4" Thick)	50.	Lin. Ft.
158	619	20' x 10" Casing Pipe End Caps	2.	Each
159	619	Cascade Waterworks Casing Spacers and Restrained Casing Spacers or Engineer Approved Equal (6-foot support spacing) (See City Std. Detail GU-07)	8.	Each
160	620	Portable Sanitary Facility	1.	Each
161	623	4 Inch PVC Irrigation Sleeve	180.	Lin. Ft.
162	623	1-1/2 Inch Irrigation Sleeve	107.	Lin. Ft.
163	623	Power Source Wire	25.	Lin. Ft.
164	623	Irrigation Controller	1.	Each
165	623	3 Inch HDPE Mainline	460.	Lin. Ft.
166	623	Manual Drain Valve	1.	Each
167	623	3/4 Inch Quick Coupler Valve	2.	Each
168	623	1 inch Automatic Control Valve	1.	Each
169	623	1-1/2 Inch Automatic Control Valve	2.	Each
170	623	2-wire Control Wire	325.	Lin. Ft.
171	623	2-wire Control (Includes Decoders & Grounding)	1.	Lump Sum
172	623	Jumbo Valve Box	2.	Each
173	623	Isolation Valves	2.	Each
174	623	1 inch PVC Lateral Pipe	450.	Lin. Ft.
175	623	1-1/2 Inch PVC Lateral Pipe	155.	Lin. Ft.
176	623	4 Inch Pop-Up Spray Sprinkler w/ Nozzle	10.	Each
177	623	Riser Assembly to Compression Tee (Not Including Tree Rings)	8.	Each
178	623	1/2" Drip Distribution Tubing	2,129.	Lin. Ft.
179	623	Drip Emitter (Includes 1/4" distribution tubing)	610.	Each
180	623	Tree Ring Assembly	18.	Each
181	623	1/2 Inch Flush Box Assembly	5.	Each
182	623	Adjust Existing Lawn Area Irrigation (Lawn Area West of Handball Court)	1.	Lump Sum
183	624	4 Inch Plastic Pipe (SCH-40 PVC) (Includes Pipe Fittings) (See Trail Drain Details)	152.	Lin. Ft.
184	624	4 Inch Plastic Pipe (Perforated) (SDR-35 PVC) (Includes Pipe Fittings) (See Trail Drain Details)	20.	Lin. Ft.
185	624	2 Inch DR-26 IPS HDPE Pipe (Includes Pipe Fittings) (See Trail Drain Details)	200.	Lin. Ft.
186	625	Construction Surveying (Includes As-Built Drawings)	1.	Lump Sum
187	626	Mobilization	1.	Lump Sum
188	627	Epoxy Pavement Marking	6.	Gallon
189	627	Preformed Thermoplastic Pavement Marking (Left Turn Arrow)	160.	Sq. Ft.
190	627	Preformed Thermoplastic Pavement Marking (Xwalk - Stop Line)	268.	Sq. Ft.
191	629	Survey Monument (Complete in Place)	1.	Each
192	630	Traffic Control Plan	1.	Lump Sum

N:\Landpro\(24 Road and G Road Intersection)\dwg\00 PHASE 1\SUMMARY OF APPROXIMATE QUANTITIES PH 1.dwg, 4/23/2021 6:37:23 AM

DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

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NO SCALE

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
SUMMARY OF APPROXIMATE QUANTITIES
PH 1 – 3

193	630	Traffic Control (Complete in Place)	1.	Lump Sum
194	630	Portable Message Sign Panel	90.	Day
195	630	Flagging	800.	Hour
196	650	Pumping System	1.	Lump Sum
197	SP	Anti-Seep Collar (4' x 4') (Construct per details shown in the plans)	1.	Each
198	SP	Bypass Pumping (North Leach Creek) (For Installation of Utilities crossing North Leach Creek) (Contractor responsible for estimating the flows in North Leach Creek & sizing pump) (Includes materials for coffer dam)	1.	Lump Sum
199	SP	Utility Trenching (Grand Valley Power & Charter) (Contractor shall provide trenching, backfill, and conduit installation for the buried Grand Valley Power and Charter/Spectrum utilities) (Utility Owner's shall provide the necessary conduits and vaults for the City Contractor to install) (Applies from Sta. 40+25 to 49+60)	1,030.	Lin. Ft.
200	SP	Utility Trenching (Century Link & Charter) (Contractor shall provide trenching and backfill for the Century Link and Charter conduits. Century Link and Charter will supply and install their own conduits)	510.	Lin. Ft.
201	SP	F/A Furnish & Install Electrical Service **(Do not add to total bid amount)** (Electrical Service for the Pedestrian Lights)	- - - - -	Force Account
202	SP	F/A Sprinklers (At Golden Gate Gas Station) **(Do not add to total bid amount)** (F/A to be used for making sprinkler system repairs in the turf area of Golden Gate gas station as a result of utility relocations)	- - - - -	Force Account
MCR		Minor Contract Revisions	- - -	- - -

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REVISION 3 REV 3	– DATE
REVISION 4 REV 4	– DATE

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
SUMMARY OF APPROXIMATE QUANTITIES
PH 1 – 4

CANYON VIEW PARK

24 ROAD

G ROAD BRIDGE OVER N. LEACH CREEK AND 24 RD BIKE PATH. SEE SGM PLANS.

LEACH CREEK REALIGNMENT SEE SGM PLANS

BIKE PATH TIE FROM STRUCTURE TO EXISTING WALK SEE STAKING PLANS

TEMPORARY PAVING UNTIL ROUNDABOUT CONSTRUCTION UP TO BRIDGE BOTH SIDES PER ROAD PLAN AND PROFILE.

WATERLINE RELOCATION (BLUE) SEE WATERLINE PLAN

LEACH CREEK REALIGNMENT SEE SGM PLANS

BIKE PATH TIE FROM STRUCTURE TO EXISTING GRADE SOUTH. SEE STAKING PLANS

WATERLINE RELOCATION (BLUE) SEE WATERLINE PLAN

SANITARY SEWER RELOCATION (RED) SEE SANITARY SEWER PLAN AND PROFILE.

STORM DRAIN RELOCATION (GREEN) SEE STORM DRAIN PLAN AND PROFILE

SPANISH TRAIL DR

G ROAD

N

W E

S

DESCRIPTION	DATE
REVISION 1 REV_1	DATE
REVISION 2 REV_2	DATE
REVISION 3 REV_3	DATE
REVISION 4 REV_4	DATE

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
PROJECT OVERVIEW

7

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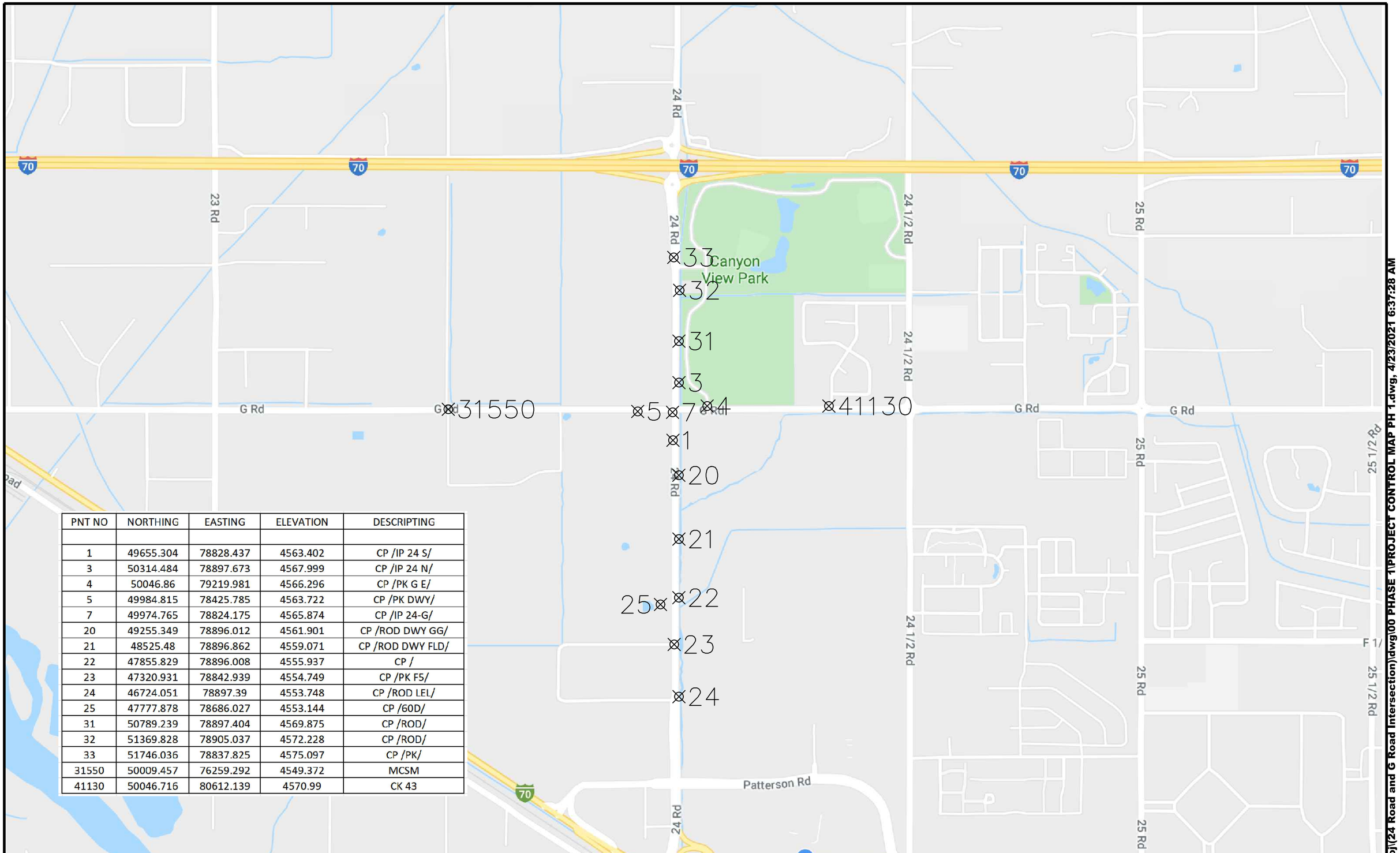

PNT NO	NORTHING	EASTING	ELEVATION	DESCRIPTING
1	49655.304	78828.437	4563.402	CP /IP 24 S/
3	50314.484	78897.673	4567.999	CP /IP 24 N/
4	50046.86	79219.981	4566.296	CP /PK G E/
5	49984.815	78425.785	4563.722	CP /PK DWY/
7	49974.765	78824.175	4565.874	CP /IP 24-G/
20	49255.349	78896.012	4561.901	CP /ROD DWY GG/
21	48525.48	78896.862	4559.071	CP /ROD DWY FLD/
22	47855.829	78896.008	4555.937	CP /
23	47320.931	78842.939	4554.749	CP /PK F5/
24	46724.051	78897.39	4553.748	CP /ROD LEL/
25	47777.878	78686.027	4553.144	CP /60D/
31	50789.239	78897.404	4569.875	CP /ROD/
32	51369.828	78905.037	4572.228	CP /ROD/
33	51746.036	78837.825	4575.097	CP /PK/
31550	50009.457	76259.292	4549.372	MCSM
41130	50046.716	80612.139	4570.99	CK 43

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REVISION ⚠ REV 3	– DATE
REVISION ⚠ REV 4	– DATE

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G ROAD BRIDGE REPLACEMENT PROJECT
PROJECT CONTROL MAP

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N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\PROJECT CONTROL MAP PH 1.dwg, 4/23/2021 6:37:28 AM

24 ROAD

LEACH CREEK

EXISTING R.O.W.

POSSIBLE STAGING AREA
(RED CROSS HATCH)

114'

180'

100'

44'

38+00

38+50

39+00

39+50

40+00

40+50

41+00

G ROAD

44'-8"

NEW R.O.W.

15'

NEW T.C.E.

NEW M.P.E.

RELOCATE GAS
(BY XCEL)

RELOCATE COMMUNICATION
AND CATV (BY CENTURY
LINK AND CHARTER)
(COMMON TRENCH)

RELOCATE WATERLINE
(SEE WATERLINE PLAN)

RELOCATE SAN. SEWER
(SEE SAN.SEW. PLAN
AND PROFILE)

RELOCATE STORM DRAIN
(SEE STM.DRN.. PLAN
AND PROFILE)

NEW 14'
M.P.E.

NEW 5'
T.C.E.

POSSIBLE STAGING AREA
(RED CROSS HATCH)

2945-042-00-018
Southeast Corner of 24 & G Rd
USHER NV LLC

DESCRIPTION	DATE
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REVISION ⚠ REV. 2	– DATE
REVISION ⚠ REV. 3	– DATE
REVISION ⚠ REV. 4	– DATE

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PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
STAGING AREA PLAN PH 1 – 1

9

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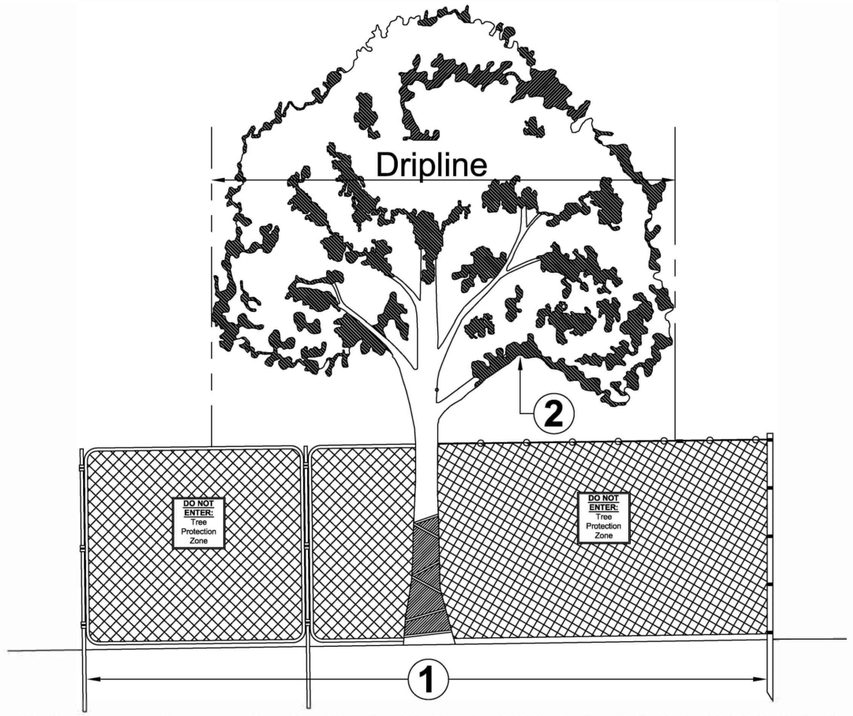

Any work in these areas require approval from Grand Junction City Forester (GJCF) prior to activity. Contact GJCF for instruction.

Area 1: Tree Protection Zone (TPZ) and Critical Root Zone Protection (CRZ)

-The Tree Protection Zone (TPZ) shall be equal to dripline or 1.5 feet radially from the tree for every one inch of trunk diameter at breast height (DBH = 4.5' above soil line), whichever is greater. In areas where space is constrained, tree protection zones may be approved at the CRZ radius.
-The Critical Root Zone (CRZ) shall be equal to one foot radially from the tree for every one inch of trunk diameter at breast height.

A. Min 6' in height steel chain link fence is required unless otherwise approved by the GJCF. Steel chain link fence panels or rolls are acceptable. With approval from GJCF, use of orange construction fencing in place of chain link fence may be acceptable.
1. When chain link rolls are installed, it shall be fastened to heavy duty steel posts with safety caps at minimum five (5) attachment points with 12-gauge wire, including points at top and bottom. Weave wire through top of roll to eliminate sag.
2. Posts shall be driven 2' to 3' below grade and spaced at max. five to ten foot (5' - 10') o.c. intervals. Fencing must be kept taut at all times.
3. "Tree Protection Zone" signs shall be placed one (1) per each tree protection zone minimum or more per direction of GJCF; maintain in the location and condition in which approved.
4. TPZ, including signage, shall be maintained in the location and condition in which approved.

Area 2: Canopy Protection

Contact GJCF if potential for tree limb damage exists and/or if pruning is needed for any clearance issues prior to performing work.

Notes

1. GJCF Tree Protection Specifications shall be followed throughout duration of work.
2. After TPZ is approved;
   A. TPZ shall not be resized, modified, removed, or altered in any manner without prior written approval. TPZ shall be maintained in place as approved until removal is authorized by GJCF.
   B. Entrance/access to the TPZ is not permitted without prior written approval from the GJCF.
   C. No materials, debris, equipment, or site amenities shall be stored within the TPZ without prior written approval from the GJCF.
3. While TPZ fencing is in place, trees shall be deep-root watered at an interval of once every two weeks when temperatures are at or above 40 degrees F. Trees shall be watered at the rate of twenty (20) gallons per inch DBH. GJCF may ask for proof of watering.
4. Violation of TPZ or damage to protected trees is subject to penalty per City Ordinance.
5. Responsible party for tree removal or damage shall be responsible for lost value based on industry standard tree appraisal methods as determined by GJCF

CITY OF Grand Junction COLORADO	**City of Grand Junction** **Office of the City Forester** 2529 High Country Ct Grand Junction, CO 81501	**Tree Protection Zone Fencing Detail**	**Detail: GJCF-TPZ 1** **Effective: 11-15-2020**

CITY OF Grand Junction COLORADO
PARKS & RECREATION

Grand Junction City Forester (GJCF) Tree Protection Specifications

1. Existing trees to be preserved in public rights of way (ROW) or public places shall be protected per GJCF standards and practices. Tree protection shall be:
   A. Installed prior to commencement of demolition and/or construction activities
   B. Inspected and approved by GJCF staff
   C. Remain in place and as approved until Certificate of Occupancy or Substantial Completion and Final Acceptance is issued
2. Tree protection requirements:
   A. Tree Protection Zone (TPZ) shall be installed at the dripline, furthest extent of tree canopy, or is equal to eighteen inches radially from the tree for every one inch of trunk diameter at breast height (DBH = 4.5' above soil line), whichever is greater
      - Reduced TPZ areas must be approved by GJCF
   B. Install six foot (6') chain link fencing prior to commencement of project construction activities
      - With approval of GJCF, 4' orange construction fencing may be acceptable in place of chain link depending on potential impacts of activity
   C. GJCF staff shall inspect and approve boundaries of tree protection zone(s) prior to commencement of demolition or construction activities
   D. Once TPZ is in place, the following are not permitted within TPZ without prior written approval from GJCF:
      - Entrance and/or access
      - Moving, resizing, removing, or altering in any manner
      - Storage of materials/debris/equipment
      - Construction activities including but not limited to: rototilling, trenching, grading, installation of underground utilities and/or site improvements, landscaping, irrigation work
      - Irrigation line work shall be completed by directional bore or hand-dig method
   E. "Tree Protection Zone" signs shall remain in place as posted by GJCF and shall be maintained in the condition in which they were installed
   F. Tree Pruning for clearance issues must have prior authorization by GJCF staff
   G. No root 2 inches or larger shall be cut; consult with GJCF staff
3. Existing ROW or public place trees approved for removal by OCF must be protected in place until removed by an GJCF-licensed tree contractor to avoid structural failures:
   A. An GJCF tree removal permit is required
   B. Tree removal permits are not included with building permits and/or plan approval and must be obtained separately from the GJCF
4. Clear visibility into TPZ must be maintained. All construction banners, screens, barriers, and/or signs (except GJCF-posted TPZ signs) must be semi-transparent and not impede inspection of TPZ by GJCF staff
5. For projects with a duration of 5 days or longer:
   A. Protected trees shall be deep-root watered at a minimum interval of once every two weeks when temperatures are at or above 40-degrees
   B. Trees shall be watered at the rate of 20 gallons per inch caliper
      - OCF may ask for documented proof of watering and/or treatment.
6. Tree removal without permit and damages to public trees may be subject to the following:
   A. Issuance of notice of violation with associated citations / fines
   B. Responsible party for tree removal or tree damage shall be responsible for lost value based on industry standard tree appraisal methods as determined by GJCF

2529 HIGH COUNTRY CT, GRAND JUNCTION, CO 81501 P [970] 254- 3825 F [970] 254-3878 www.gjcity.org

DESCRIPTION	DATE
REVISION ⚠ REV 1	DATE
REVISION ⚠ REV 2	DATE
REVISION ⚠ REV 3	DATE
REVISION ⚠ REV 4	DATE

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DESIGNED BY JCS DATE 2022
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APPROVED BY TCP DATE 2022

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
TREE PROTECTION ZONE DETAILS
& SPECIFICATIONS – 1

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\TREE PROTECTION ZONE DETAILS & SPECIFICATIONS.dwg, 4/23/2021 6:37:33 AM

2701-324-00-093
Northwest Corner of G and 24 Rd
USHER NV LLC

2701-333-00-152
728 24 RD
CITY OF GRAND JUNCTION

N
W E
S

24 ROAD

NORTH LEACH CREEK

LEACH CREEK

REMOVE PIPE AS NEEDED TO FACILITATE LEACH CREEK REALIGNMENT

PROTECT PINE TREE

APPROXIMATE LIMITS OF CONSTRUCTION. CLEARING AND GRUBBING WITHIN LIMITS OF CONSTRUCTION

REMOVE TREE

REMOVE PIPE AS NEEDED TO FACILITATE NORTH LEACH CREEK REALIGNMENT

SOD WILL BE REMOVED AS NEEDED TO FACILITATE CONSTRUCTION. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.

REMOVE STEEL POSTS (14 EA)

PROTECT BENCH

PROTECT OAK TREE

PROTECT EXISTING 24 ROAD CURB AND GUTTER (TYP.)

REMOVE TREES

PROTECT BENCH AND DRINKING FOUNTAIN

PROTECT PARK SHELTER

REMOVE TREES

REMOVE TREES (11 EA)

ABANDON WELL

PROTECT MEMORIAL TREE & PLAQUE

IRRIGATION FOR CANYON VIEW WILL BE REMOVED AND MODIFIED AS NEEDED TO FACILITATE CONSTRUCTION. SEE IRRIGATION PLANS FOR ADDITIONAL INFORMATION

REMOVE EXISTING SEWER PIPE EAST OF THE MANHOLE AND USE CONCRETE TO PLUG EAST HOLE IN MANHOLE

REMOVE EXISTING SEWER PIPE (72 LF ±)

REMOVE EXISTING PIPE (EAST END OF PIPE LOCATION UNKNOWN)

REMOVE TREE

REMOVE EXISTING 2" COPPER WATER SERVICE LINE FROM METER PIT TO DRINKING FOUNTAIN

REMOVE EXISTING STORM PIPE (22 LF ±)

REMOVE TREES

REMOVE POWER POLE AND GUY ANCHORS (BY GVP)

REMOVE EXISTING STORM PIPE (116 LF ±)

REMOVE DRAIN PIPE (100 LF ±)

REMOVE EXISTING STORM PIPE (146 LF ±)

REMOVE TREE

REMOVE BUSHES

PROTECT PINE TREES

REMOVE EXISTING WATER VALVE (EAST). INSTALL 8" BLIND FLANGE AND ABANDON WATER PIPE

PROTECT SIGNAL

RELOCATE 2" GAS (BY XCEL)

REMOVE EXISTING WATERLINE (170 LF ±)

ABANDON WELL

REMOVE EXISTING STORM MANHOLE

REMOVE TREE

REMOVE WATER METER

REMOVE SIGN

REMOVE SIGN

REMOVE CONCRETE SIDEWALK

EXISTING STORM INLET REMAINS IN PLACE. EXISTING INVERT OUT EAST TO BE GROUTED CLOSED (SEE STORM DRAIN PLAN AND PROFILE FOR ADDITIONAL INFORMATION)

PROTECT EXISTING TRAFFIC SIGNAL TELEMETRY, POWER, BOXES, CONDUITS, ETC. SIGNAL SHALL REMAIN IN OPERATION DURING CONSTRUCTION

REMOVE EXISTING SEWER PIPE (79 LF ±)

REMOVE EXISTING SEWER MANHOLE

REMOVAL OF ABANDONED UTILITY PIPES AND CONDUITS (GAS, POWER, COMMUNICATIONS) (170 LF ± EACH UTILITY) (UTILITY RELOCATIONS SHALL BE COMPLETED AND IN SERVICE PRIOR TO ABANDONED UTILITY REMOVAL)

REMOVE EXISTING STORM INLET AND STORM PIPE (35 LF ±)

REMOVE CONCRETE CURB, GUTTER, AND SIDEWALK

RELOCATE WATERLINE (SEE WATERLINE PLANS)

REMOVAL OF ASPHALT MAT AS INDICATED BY DOT HATCHING (FULL-DEPTH)

REFERENCE AND RESET SURVEY MONUMENT. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR'S SURVEYOR MUST SUBMIT FIELD NOTES DETAILING THE PERMANENT REFERENCES PLACED FOR EACH MONUMENT IN DANGER OF LOSS DUE TO CONSTRUCTION. THE METHOD OF REFERENCING MUST BE APPROVED BY THE CITY SURVEYOR PRIOR TO ANY CONSTRUCTION. AFTER CONSTRUCTION, THE SURVEYOR MUST FILE A NEW MONUMENT RECORD FOR EACH POINT THAT WAS REPLACED

REMOVAL OF BRIDGE (REMOVAL SHALL INCLUDE ALL ITEMS ASSOCIATED WITH BRIDGE FROM EXISTING GROUND SURFACE ELEVATION DOWN TO AN ELEVATION OF 4563. INCLUDES, BUT NOT LIMITED TO, BRIDGE DECK, HEADWALLS, WINGWALLS, ABUTMENTS, ETC.)

REMOVE CONCRETE CURB RETURN AND DECO BRIDGE WALL

G ROAD

G RD CENTERLINE /MONUMENT LINE

CANYON VIEW PARK INGRESS/EGRESS

▌ = THIS SYMBOL REPRESENTS ABANDONING PIPE BY PLUGGING END OF PIPE WITH CONCRETE

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
REMOVAL PLAN – 1

11

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\REMOVAL PLAN PH 1.dwg, 4/23/2021 6:41:14 AM

REMOVE CONCRETE CURB RETURN AND DECO BRIDGE WALL

REFERENCE AND RESET SURVEY MONUMENT. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR'S SURVEYOR MUST SUBMIT FIELD NOTES DETAILING THE PERMANENT REFERENCES PLACED FOR EACH MONUMENT IN DANGER OF LOSS DUE TO CONSTRUCTION. THE METHOD OF REFERENCING MUST BE APPROVED BY THE CITY SURVEYOR PRIOR TO ANY CONSTRUCTION. AFTER CONSTRUCTION, THE SURVEYOR MUST FILE A NEW MONUMENT RECORD FOR EACH POINT THAT WAS REPLACED.

REMOVAL OF BRIDGE (REMOVAL SHALL INCLUDE ALL ITEMS ASSOCIATED WITH BRIDGE FROM EXISTING GROUND SURFACE ELEVATION DOWN TO AN ELEVATION OF 4563. INCLUDES, BUT NOT LIMITED TO, BRIDGE DECK, HEADWALLS, WINGWALLS, ABUTMENTS, ETC.)

RELOCATE 2" GAS (BY XCEL)

REMOVAL OF ABANDONED UTILITY PIPES AND CONDUITS (GAS, POWER, COMMUNICATIONS) (146 LF ± ABANDONED 6" I.P. GAS UTILITY) (UTILITY RELOCATIONS SHALL BE COMPLETED AND IN SERVICE PRIOR TO ABANDONED UTILITY REMOVAL)

REMOVAL OF ASPHALT MAT AS INDICATED BY DOT HATCHING (FULL-DEPTH)

SEE WATERLINE PLAN FOR REMOVALS ASSOCIATED WITH WATERLINE CONSTRUCTION TO THE EAST

RELOCATE 6" I.P. GAS LINE (BY XCEL)

G ROAD

REMOVE EXISTING SEWER PIPE (79 LF ±)

REMOVE EXISTING SEWER MANHOLE

REMOVE EXISTING SEWER PIPE (95 LF ±)

PROTECT PIEZOMETER WELL

G RD CENTERLINE MONUMENT LINE

PROTECT EXISTING TRAFFIC SIGNAL TELEMETRY, POWER, BOXES, CONDUITS, ETC. SIGNAL SHALL REMAIN IN OPERATION DURING CONSTRUCTION

PROTECT SIGNAL

REMOVE SIGNS

REMOVE SIGN

REMOVE UTILITY POLE AND GUY ANCHORS (BY GVP)

REMOVE PIPE (34 LF)

REMOVE EXISTING CONCRETE IRRIGATION DITCH (SEE WATERLINE PLANS FOR REMOVAL TO THE EAST) (1,075 LF ± EACH DITCH)

REMOVAL OF FENCE (SEE WATERLINE PLANS FOR REMOVAL TO THE EAST) (1,096 LF ±)

24 ROAD

NORTH LEACH CREEK

REMOVAL OF FENCE (195 LF ±)

NEW ROW LINE

REMOVE CONCRETE CURB AND GUTTER

NEW MPE LINE

REMOVAL OF ASPHALT MAT AS INDICATED BY DOT HATCHING (FULL-DEPTH)

APPROXIMATE LIMITS OF CONSTRUCTION

REMOVAL OF FENCE TO LIMITS OF CONSTRUCTION

2945-051-18-001
2395 G RD
GOLDEN GATE PETROLEUM OF NEVADA LLC

I = THIS SYMBOL REPRESENTS ABANDONING PIPE BY PLUGGING END OF PIPE WITH CONCRETE

2945-042-00-018
Southeast Corner of 24 & G Rd
USHER NV LLC

DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

SCALE 0 10 20 40

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
REMOVAL PLAN – 2

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N:\Landpro\(24 Road and G Road Intersection)\dwg\00 PHASE 1\REMOVAL PLAN PH 1.dwg, 4/23/2021 6:41:19 AM

GENERAL NOTES:

1 PURPOSE: TO SEARCH, INTERPRET, AND DEPICT SPECIFIC EXISTING UNDERGROUND UTILITIES AS PER THE SCOPE OF WORK FOR THE 24 ROAD AND G ROAD PROJECT.

2 THE SUBSURFACE UTILITIES SHOWN ON THE SUBSURFACE UTILITY INVESTIGATION WERE IDENTIFIED USING APPROPRIATE INDUSTRY STANDARD DETECTION METHODOLOGIES IN ACCORDANCE WITH THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA. QUALITY LEVELS AND DEFINITIONS PER CI/ASCE STANDARD NO. 38.

3 QUALITY LEVEL "D" – QL–D – DEPICTED ACCORDING TO UTILITY RECORD INFORMATION AND IN–FIELD VISUAL INSPECTION. NO ELECTRONIC DESIGNATING INFORMATION WAS OBTAINED. UTILITIES WITH A QL–D LABEL ARE DEPICTED ON THE PLANS USING PROFESSIONAL JUDGMENT IN INTERPRETING THIRD–PARTY RECORDS OR OTHER INFORMATION.

4 QUALITY LEVEL "C" – QL–C – EXISTING UTILITY STRUCTURES HAVE BEEN FIELD LOCATED AND SURVEYED TO ASSIST IN THE DEPICTING OF THE UTILITIES SHOWN ON THE RECORDS. NO ELECTRONIC DESIGNATING INFORMATION WAS OBTAINED. UTILITIES WITH A QL–C LABEL ARE DEPICTED ON THE PLANS USING PROFESSIONAL JUDGMENT IN INTERPRETING AND CORRELATING THE SURVEYED UTILITY APPURTENANCES, WITH THIRD–PARTY RECORDS INFORMATION.

5 QUALITY LEVEL "B" – QL–B – INFORMATION WAS OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF THE SUBSURFACE UTILITIES. QL–B DATA SHOULD BE REPRODUCIBLE BY SURFACE GEOPHYSICS AT ANY POINT OF THEIR DEPICTION. ALL UTILITIES ARE QL–B UNLESS OTHERWISE NOTED. THEY ARE DEPICTED ON THE PLANS USING PROFESSIONAL JUDGMENT IN SELECTING AND INTERPRETING APPROPRIATE GEOPHYSICAL DATA, SURVEYING TO APPROPRIATE PROJECT ACCURACIES, AND USING JUDGMENT TO CORRELATE THIRD–PARTY RECORDS OR OTHER INFORMATION, IF AVAILABLE, TO THESE QL–B DEPICTIONS.

6 QUALITY LEVEL "A" – QL–A – OBTAIN PRECISE HORIZONTAL AND VERTICAL POSITION OF THE UTILITY LINE BY EXCAVATING A TEST HOLE. THE TEST HOLE SHALL BE DONE USING VACUUM EXCAVATION OR COMPARABLE NON–DESTRUCTIVE EQUIPMENT IN A MANNER AS TO CAUSE NO DAMAGE TO UTILITY LINE.

7 RELIANCE UPON SUBSURFACE UTILITY DATA FOR RISK MANAGEMENT PURPOSES DURING BIDDING DOES NOT RELIEVE THE EXCAVATOR OR UTILITY OWNER FROM FOLLOWING ALL APPLICABLE UTILITY DAMAGE PREVENTION STATUTES, POLICIES, AND/OR PROCEDURES DURING EXCAVATION.

8 IT IS IMPORTANT THAT THE CONTRACTOR INVESTIGATES AND UNDERSTANDS THE SCOPE OF WORK AND LIMITS OF THE UTILITY INVESTIGATIONS LEADING TO THESE UTILITY DEPICTIONS.

9 UTILITY SIZE AND TYPE ARE DETERMINED THROUGH AVAILABLE UTILITY OWNER INFORMATION OR FIELD OBSERVATIONS; UTILITIES LABELED AS UNKNOWN HAVE NO CORRELATED RECORDS OR VISIBLE APPURTENANCES TO DETERMINE FUNCTION OR TYPE.

10 UTILITY MAPPING WAS COMPLETED IN THE FIELD ON 6/18/2020. UTILITIES MAY HAVE BEEN CHANGED OR ADDED AFTER THIS DATE.

11 "END OF INFORMATION" (EOI) SIGNIFIES GEOPHYSICAL EQUIPMENT LOST THE SIGNAL OF THE TARGET UTILITY AND THE LINE WAS UNABLE TO BE DESIGNATED ANY FURTHER. LINES MAY CONTINUE ON OR MAY STOP. POSITIVE VERIFICATION BY EXCAVATION IS REQUIRED TO CONFIRM PRESENCE BEYOND END OF SIGNAL.

12 THE FOLLOWING EQUIPMENT WAS USED IN THE UTILITY INVESTIGATION: VM–810 METROTECH UTILITY LINE LOCATOR, TRIMBLE GPS SURVEY CONTROL AND/OR TOTAL STATION.

13 HORIZONTAL COORDINATE SYSTEM: PROJECT COORDINATES ARE BASED ON MESA COUNTY LOCAL COORDINATE SYSTEM, MCLS ZONE GVA.

14 VERTICAL DATUM: WGS 1984

15 SEE THE STANDARD ABBREVIATIONS, LEGENDS, AND SYMBOLS FOR UTILITY LINE LINE TYPE DEPICTIONS, UTILITY APPURTENANCES SYMBOLS, AND ABBREVIATIONS USED FOR THE SUBSURFACE UTILITY ENGINEERING PLAN.

16 THE FOLLOWING COMPANIES HAVE NOT SUPPLIED RECORDS AS OF 11/05/2020: CHARTER CABLE

17 THE OWNERS WITHIN THE PROJECT LIMITS ARE LISTED IN THE TABLE BELOW BUT MAY NOT BE LIMITED TO THOSE LISTED IN THE TABLE.

UTILITIES AND AGENCIES

AGENCY	NAME	POSITION	ROLE	MAILING ADDRESS	STREET ADDRESS	CITY, STATE	VOICE–WK	FAX
CITY OF GRAND JUNCTION	LEE COOPER	PROJECT ENGINEER	SANITARY SEWER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501	(970) 256–4155	(970) 256–4022
CITY OF GRAND JUNCTION	TOM LANAM	TRAFFIC SUPERVISOR	TRAFFIC	333 WEST AVE BLDG D	333 WEST AVE BLDG D	GRAND JCT., CO 81501	(970) 244–1573	(970) 256–4022
GRAND VALLEY IRRIGATION COMPANY	PHIL BERTRAND	IRRIGATION SUPERINTENDENT	IRRIGATION	988 26 RD	988 26 RD	GRAND JCT., CO 81506	(970) 242–2762	
SPECTRUM	MARK KOSTELECKY	MANAGER	CABLE TV	2502 FORESIGHT CIRCLE	2502 FORESIGHT CIRCLE	GRAND JCT., CO 81504	(970) 245–8750	(970) 245–6803
CENTURYLINK	CHRIS JOHNSON	ENGINEER	TELEPHONE	2524 BLICHMANN AVE	2524 BLICHMANN AVE	GRAND JCT., CO 81504	(970) 244–4311	(970) 240–4349
UTE WATER	JUSTIN BATES	SUPERVISOR	WATER	PO BOX 460	2190 H ¼ RD	GRAND JCT., CO 81502	(970) 242–7491	(970) 242–9189
XCEL	BRENDA BOES	UNIT MANAGER	ELECTRIC	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244–2664	(970) 244–2664
XCEL	SARAH DARRICAU	UNIT MANAGER	GAS	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244–2656	(970) 244–2656
GRAND VALLEY POWER	MIKE GARDNER	SUPERVISOR	ELECTRIC	845 22 RD	845 22 RD	GRAND JCT., CO 81505	(970) 242–0040	
UNITE PRIVATE NETWORKS			COMMUNICATION	123 N 7TH ST., #100	123 N 7TH ST., #100	GRAND JCT., CO 81501	(866) 813–3608	

DESCRIPTION	DATE
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REVISION 3 REV. 3	DATE
REVISION 4 REV. 4	DATE

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NO SCALE

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207–F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
S.U.E. GENERAL NOTES

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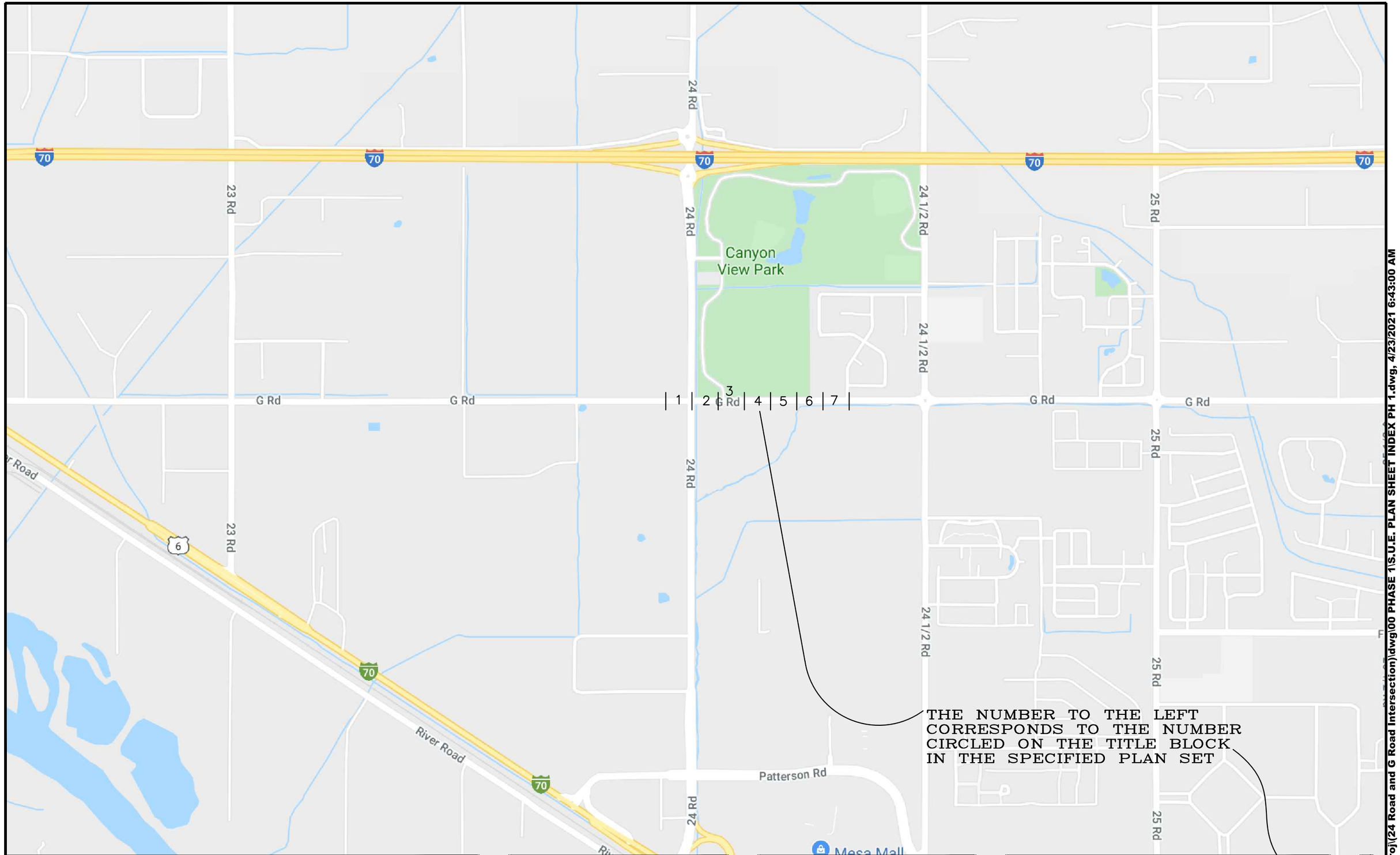

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REVISION ⚠ REV_2	– DATE
REVISION ⚠ REV_3	– DATE
REVISION ⚠ REV_4	– DATE

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APPROVED BY	TCP	DATE	2022

SCALE

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
S.U.E. PLAN SHEET INDEX K

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NOTE:
ALL UTILITIES DEPICTED AT QUALITY LEVEL B (QL–B) UNLESS OTHERWISE NOTED

ACRONYMS:
C.O.G.J CITY OF GRAND JUNCTION
G.V.I.C. GRAND VALLEY IRRIGATION COMPANY
G.V.P. GRAND VALLEY POWER
G.J.D.D. GRAND JUNCTION DRAINAGE DISTRICT
U.P.N. UNITE PRIVATE NETWORKS

2701–324–00–093
Northwest Corner of G and 24 Rd
USHER NV LLC

MATCH LINE

FIBER 2" HDPE

XCEL PRIMARY 6" PVC

G.V.P. OVERHEAD POWER LINE AND CHARTER OVERHEAD CATV LINE (BELOW GVP)LOWER LINE APPROXIMATELY 25' ABOVE EX. GROUND ELEVATION 4565.1 AT POWER POLE

G.V.P. OVERHEAD POWER LINE AND CHARTER OVERHEAD CATV LINE (BELOW GVP) LOWER LINE APPROXIMATELY 20' ABOVE EX. GROUND AT SAG

QL–C C.O.G.J. 8" PVC SANITARY SEWER INSTALLED 1999

XCEL PRIMARY I/O IN 4" CONDUIT

QL–D U.P.N. UNDERGROUND FIBER CONDUIT

CENTURY LINK 25 PR IN 4" PVC TELE

CENTURY LINK 4" PVC TELE

UTE 6" PVC WATER LINE

QL–C G.V.I.C. 12" RCP IRRIGATION LINE

PNT 11070
RIM 4568.81
HIGH WSE 4565.2
12" IN N 4562.31
12" OUT W 4563.32
12" OUT E 4562.59
12" OUT S 4562.26

UTE 10" PVC WATER LINE INSTALLED 1999

PNT 11076
G1–232–012
RIM 4566.78
INV E 4551.54
INV W 4549.93
INV S 4549.87

TH 164 FIBER 2" HDPE
D 3.92' EG 4564.62
T.O.P. 4560.70

TH 163 ELEC 6" PVC
D 2.33' EG 4564.56
T.O.P. 4562.23

PNT 10984
RIM 4564.73
12" CONC IN E 4562.33
12 PVC OUT S 4561.28

QL–C G.V.I.C. 12" PVC IRRIGATION LINE

CENTURY LINK 4" PVC TELE

TH 124 THIS TESTHOLE SEEMS TO BE IN ERROR

TH 123 TELE
2EA–4"PVC D 2.92'
EG 4565.6 T.O.P. 4562.68

TH 24 XCEL
2"HDPE D 3.25'
EG 4565.56
T.O.P. 4562.31

TH 122
UTE 8"PVC D 4.17'
EG 4565.64
T.O.P. 4561.47

TH 22
XCEL
1.5"HDPE
D 3.83'
EG 4566.65
T.O.P. 4562.82

UTE 8" PVC WATER LINE

XCEL 2" PE GAS LINE

TH 23 XCEL
2EA–1"HDPE
D 3'&3.38'
EG 4566.05
T.O.P. 4563.05
&4562.67

QL–C G.V.I.C. 12" PVC IRRIGATION LINE

QL–D U.P.N. UNDERGROUND FIBER CONDUIT

SPECTRUM 2 EA 2" CONDUITS

XCEL 6" MILL WRAP INTERMEDIATE PRESSURE GAS LINE

G ROAD

G RD CENTERLINE

TH 121
XCEL 6"STEEL D 3.92'
EG 4565.7
T.O.P. 4561.78

TH 162 IRR 12" PVC
D 2.5' EG 4564.52
T.O.P. 4562.02

UTE 10" PVC WATER LINE

UTE WATER SERVICE & 6" CROSS CONNECTION DEVICE FOR FIRELINE

TH 161 IRR
12"PVC
D 0.33'
EG 4564.73
T.O.P. 4564.4

this a bend?

TH 120
UTE
10"PVC
D 5.25'
EG 4565.59
T.O.P. 4560.34

QL–C G.V.I.C. 12" RCP IRRIGATION LINE

C.O.G.J. TRAFFIC 3EA–2" PVC

C.O.G.J. TRAFFIC SIGNAL POLE MAST ARM APPROXIMATELY 20' ABOVE EX. GROUND EL 4566.1

PIPE STUBBED 10' SOUTH OF MH CIRCA 1999. IRRIGATION RIGHT STILL EXIST SOUTH

XCEL PRIMARY 1000 CU IN 2" PVC CONDUIT

C.O.G.J. TRAFFIC 2" PVC

UTE 10" PVC WATER LINE INSTALLED 1999

QL–C C.O.G.J. 12" PVC SANITARY SEWER INSTALLED 1999

24 ROAD

QL–D U.P.N. UNDERGROUND FIBER CONDUIT

XCEL #2 AL 1 PHS ELECT

XCEL PRIMARY 1000 CU IN 6" PVC CONDUIT

SPECTRUM 2 EA 2" CONDUITS

C.O.G.J. TRAFFIC 2" PVC

2945–051–18–001
2395 G RD
GOLDEN GATE PETROLEUM OF NEVADA LLC

MATCH LINE

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SCALE 0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207–F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
SUBSURFACE UTILITY
ENGINEERING PLAN – 1

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N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\SUBSURFACE UTILITY ENGINEERING PLAN PH 1.dwg, 4/23/2021 6:43:01 AM

XCEL 1 1/4" PE GAS LINE

8" CMP CULVERT EAST END NOT FOUND

8" CMP E.END UNKNOWN

INV 4561.81

QL-C C.O.G.J. 10" PVC SANITARY SEWER INSTALLED 1999

QL-C C.O.G.J. 18" RCP STORM DRAIN

CENTURY LINK 2EA-2" CONDUITS 100 PR

XCEL PRIMARY 4" PVC

G.V.P. OVERHEAD POWER LINE AND CHARTER OVERHEAD CATV LINE (BELOW GVP) LOWER LINE APPROXIMATELY 25' ABOVE EX. GROUND ELEVATION 4566.7 AT POWER POLE

2701-333-00-152
728 24 RD
CITY OF GRAND JUNCTION

IRRIGATION CONTROL BOXES

PNT 11091
G1-232-015
GRATE 4566.09
INV W 4562.84
INV E 4560.04

PNT 11383
G1-241-001
RIM 4566.43
INV SE 4557.30
INV W 4554.38

QL-C C.O.G.J. 18" RCP STORM DRAIN

PNT 11386
G1-241-148
GRATE 4566.21
INV N 4561.53
INV E 4560.56
INV S 4560.41
INV W 4560.36

QL-D C.O.G.J. 4" PVC STORM DRAIN

UTE 3/4" TYPE K COPPER WATER SERVICE LINE
TH 26
UTE
1"COPPER
D 3.67'
EG 4566.40
T.O.P. 4562.73

MON WELL 4

MON WELL 1

QL-C C.O.G.J. 15" RCP STORM DRAIN

XCEL PRIMARY 2EA-4" PVC

CENTURY LINK 2EA-4"PVC TELEPHONE 100 PR

CENTURY LINK 1" DIRECT BURY TELEPHONE 400 PR

TH 01 CENTURYLINE
2EA-4"PVC D 2.25'
EG 4566.74 T.O.P. 4564.49

TH 07 XCEL
4"PVC D 4.92'
EG 4566.78 T.O.P. 4561.86

TH 02 XCEL
4"PVC D 4'
EG 4566.73
T.O.P. 4562.73

TH 03 UTE 8"PVC
D 3.5' EG 4566.36
T.O.P. 4562.86

TH 04 XCEL 2" HDPE
D 2.12' EG 4566.42 T.O.P. 4564.30

TH 10 UTE 8"PVC
D 3.46 EG 4566.54
T.O.P. 4563.08

TH 11
XCEL
2"HDPE
D 2.46'
EG 4566.58
T.O.P. 4564.12

C.O.G.J. TRAFFIC 3EA-2" PVC

UTE 8" PVC WATER LINE

CENTURY LINK 2EA-2" CONDUITS 100 PR

TH 21
XCEL
2"HDPE
D 3.96'
EG 4566.34
T.O.P.4562.38

QL-C C.O.G.J. 10" PVC SANITARY SEWER INSTALLED 1991

PNT 11302
F4-241-002
RIM 4566.19
INV E 4558.47
INV NW 4558.39

QL-D C.O.G.J. 12" RCP STORM DRAIN

PNT 11394
G1-241-031
GRATE 4565.84
INV N 4560.59
INV S 4561.06

XCEL 2" PE GAS LINE

XCEL 6" MILL WRAP INTERMEDIATE PRESSURE GAS LINE

TH 18
XCEL
6"STEEL
D 4.67'
EG 4566.35
T.O.P. 4561.68

TH 17
XCEL
6"STEEL
D 4.58'
EG 4566.38
T.O.P. 4561.80

TH 06 XCEL 6"STEEL
D 4.42' EG 4566.59
T.O.P. 4562.17

TH 13
XCEL
6" STEEL
D 4.42'
EG 4566.69
T.O.P. 4562.27

G ROAD

G RD CENTERLINE/CROWN

MATCH LINE

MATCH LINE

TH 20
XCEL
6"STEEL
D 3'
EG 4566.25
T.O.P. 4563.25

C.O.G.J. TRAFFIC 3EA-2" PVC

TH 19
COGJ
3EA-2"PVC
D 2.83'
EG 4565.99
T.O.P. 4563.16

12" CMP CULVERT

INV 4563.94

INV 4560.15

C.O.G.J. TRAFFIC 3EA-2" PVC

G.V.P. OVERHEAD POWER LINE AND CHARTER OVERHEAD CATV LINE (BELOW GVP) LOWER LINE APPROXIMATELY 20' ABOVE EX. GROUND AT SAG

G.V.P. OVERHEAD POWER LINE AND CHARTER OVERHEAD CATV LINE (BELOW GVP) LOWER LINE APPROXIMATELY 25' ABOVE EX. GROUND ELEVATION 4565.9 AT POWER POLE

QL-C C.O.G.J. 10" PVC SANITARY SEWER INSTALLED 1991

G.V.P. OVERHEAD POWER LINE AND CHARTER OVERHEAD CATV LINE (BELOW GVP) LOWER LINE APPROXIMATELY 20' ABOVE EX. GROUND AT SAG

24 ROAD

2945-042-00-018
Southeast Corner of 24 & G Rd
USHER NV LLC

NOTE:
ALL UTILITIES DEPICTED AT QUALITY LEVEL B (QL-B) UNLESS OTHERWISE NOTED

ACRONYMS:

C.O.G.J	CITY OF GRAND JUNCTION
G.V.I.C.	GRAND VALLEY IRRIGATION COMPANY
G.V.P.	GRAND VALLEY POWER
G.J.D.D.	GRAND JUNCTION DRAINAGE DISTRICT

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
SUBSURFACE UTILITY
ENGINEERING PLAN – 2

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2701-333-00-152
728 24 RD
CITY OF GRAND JUNCTION

N
W E
S

MATCH LINE

XCEL PRIMARY 4" PVC

QL-C C.O.G.J. 15" RCP STORM DRAIN

PNT 11478
G1-241-032
GRATE 4566.15
INV E 4561.35
INV W 4561.25

QL-C C.O.G.J. 15" RCP STORM DRAIN

PNT 11548
G1-241-033
GRATE 4566.26
INV E 4561.46
INV W 4561.44

QL-C C.O.G.J. 15" RCP STORM DRAIN

XCEL PRIMARY 4" PVC

PNT 11628
G1-241-034
RIM 4567.22
INV NE 4564.92
INV SE 4562.92
INV E>W 4561.92

QL-D C.O.G.J. 4" PVC STORM DRAIN

CENTURY LINK PEDESTAL

QL-C C.O.G.J. 8" PVC STORM DRAIN

QL-D C.O.G.J. 15" CMP STORM DRAIN

6'WALK
2' CURB & GUTTER
8'WALK
3' SPLIT RAIL
HANDICAPPED PARKING
CANYON VIEW PARK
IRR
IRR DRAIN
6' CHAINLINK
12' MONO WALK,CURB,&VPAN
STOP
15" RCP STM
15"RCP
15" CMP STM
8"PVC STM
4"PLS

TH 08 CENTURYLINK 2EA-4" PVC
D 2.33' EG 4566.94 T.O.P. 4564.61

TH 08.1 XCEL 4" PVC
D 7.75' EG 4566.97 T.O.P. 4559.22

CENTURY LINK 2EA-4"PVC TELEPHONE 100 PR

PNT 11623
G1-241-092
GRATE 4565.42
INV 4563.22

CENTURY LINK 1" DIRECT BURY TELEPHONE

UTE 8" PVC WATER LINE

8" PVC

TH 14 UTE 8"PVC D 3.79 EG 4566.63
T.O.P. 4562.84

TH 15
XCEL
2"HDPE
D 2.58'
EG 4566.68
T.O.P. 4564.10

2" PE
ABANDON 2"

TH 165
XCEL
2"HDPE
D 2.67'
EG 4566.74
T.O.P. 4564.07

2' C&G

XCEL 2" PE GAS LINE

G ROAD

XCEL 6" MILL WRAP INTERMEDIATE PRESSURE GAS LINE

6" MW

41+00
41+50
42+00
42+50
43+00

10"PVC SAN

45 MPH/
NO PARKING

NO PARKING

OHP

5'WOVEN WIRE FENCE

(ABANDON)
CONC DITCH

G R RD CENTERLINE/CROWN

G.V.P. OVERHEAD POWER LINE AND CHARTER OVERHEAD CATV LINE (BELOW GVP) LOWER LINE APPROXIMATELY 20' ABOVE EX. GROUND AT SAG

QL-C C.O.G.J. 10" PVC SANITARY SEWER INSTALLED 1991

G.V.P. OVERHEAD POWER LINE AND CHARTER OVERHEAD CATV LINE (BELOW GVP) LOWER LINE APPROXIMATELY 25' ABOVE EX. GROUND ELEVATION 4566.8 AT POWER POLE

PNT 11703
F4-241-003
RIM 4566.81
INV E>W 4560.23

G.V.P. OVERHEAD POWER LINE AND CHARTER OVERHEAD CATV LINE (BELOW GVP) LOWER LINE APPROXIMATELY 15' ABOVE EX. GROUND AT SAG

QL-C C.O.G.J. 10" PVC SANITARY SEWER INSTALLED 1991

NOTE:
ALL UTILITIES DEPICTED AT QUALITY LEVEL B (QL-B) UNLESS OTHERWISE NOTED

ACRONYMS:

C.O.G.J	CITY OF GRAND JUNCTION
G.V.I.C.	GRAND VALLEY IRRIGATION COMPANY
G.V.P.	GRAND VALLEY POWER
G.J.D.D.	GRAND JUNCTION DRAINAGE DISTRICT

2945-042-00-018
Southeast Corner of 24 & G Rd
USHER NV LLC

MATCH LINE

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\SUBSURFACE UTILITY ENGINEERING PLAN PH 1.dwg, 4/23/2021 6:43:08 AM

DESCRIPTION	DATE
REVISION ⚠ REV. 1	DATE
REVISION ⚠ REV. 2	DATE
REVISION ⚠ REV. 3	DATE
REVISION ⚠ REV. 4	DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

SCALE 0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
SUBSURFACE UTILITY
ENGINEERING PLAN – 3

17

2701-333-00-152
728 24 RD
CITY OF GRAND JUNCTION

N
W E
S

MATCH LINE

CENTURY LINK 1" DIRECT BURY TELEPHONE

CENTURY LINK 1" DIRECT BURY TELEPHONE

~LAWN~

6' CHAINLINK

12' MONO WALK,CURB,&VPAN

T

C 2" PE

XCEL 2" PE GAS LINE

EX. ASPH.

XCEL 6" MILL WRAP INTERMEDIATE PRESSURE GAS LINE

G ROAD

44+00 44+50 45+00 45+50 46+00

6" MW

10"PVC SAN

G RD CENTERLINE/CROWN

NO PARKING

~DIRT~

OHP

5'WOVEN WIRE FENCE (ABANDON)

CONC DITCH

QL-C
C.O.G.J. 10" PVC SANITARY SEWER INSTALLED 1991

G.V.P. OVERHEAD POWER LINE AND CHARTER OVERHEAD CATV LINE (BELOW GVP) LOWER LINE APPROXIMATELY 15' ABOVE EX. GROUND AT SAG

G.V.P. OVERHEAD POWER LINE AND CHARTER OVERHEAD CATV LINE (BELOW GVP) LOWER LINE APPROXIMATELY 20' ABOVE EX. GROUND ELEVATION 4567.6 AT POWER POLE

NOTE:
ALL UTILITIES DEPICTED AT QUALITY LEVEL B (QL-B) UNLESS OTHERWISE NOTED

ACRONYMS:

C.O.G.J	CITY OF GRAND JUNCTION
G.V.I.C.	GRAND VALLEY IRRIGATION COMPANY
G.V.P.	GRAND VALLEY POWER
G.J.D.D.	GRAND JUNCTION DRAINAGE DISTRICT

2945-042-00-018
Southeast Corner of 24 & G Rd
USHER NV LLC

DESCRIPTION	DATE
REVISION 1 REV_1	DATE
REVISION 2 REV_2	DATE
REVISION 3 REV_3	DATE
REVISION 4 REV_4	DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

SCALE 0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
SUBSURFACE UTILITY
ENGINEERING PLAN – 4

18

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\SUBSURFACE UTILITY ENGINEERING PLAN PH 1.dwg, 4/23/2021 6:43:11 AM

2701-333-00-152
728 24 RD
CITY OF GRAND JUNCTION

N
W E
S

MATCH LINE

MATCH LINE

CENTURY LINK 1" DIRECT BURY TELEPHONE

CENTURY LINK 1" DIRECT BURY TELEPHONE

~LAWN~

6' CHAINLINK

12' MONO WALK,CURB,&VPAN

TH 170 TELE
1"DIRECT BURY
D 3' EG 4567.29
T.O.P. 4564.29

TH 169 TELE
1"DIRECT BURY
D 1.58'
EG 4567.51
T.O.P. 4565.93

TH 168
XCEL
2"HDPE
D 2.83'
EG 4567.60
T.O.P. 4564.77

TH 172
XCEL
2"HDPE
D 3'
EG 4567.72
T.O.P. 4564.72

TH 174
XCEL
2"HDPE
D 1.75'
EG 4568.02
T.O.P. 4566.27

XCEL 2" PE
GAS LINE

TH 176
XCEL
2"HDPE
D 2.83'
EG 4568.25
T.O.P. 4565.42

G ROAD

TH 167
XCEL
6"STEEL
D 4.83'
EG 4568.21
T.O.P. 4563.4

47+00

TH 171
XCEL
6"STEEL
D 4.67'
EG 4568.33
T.O.P. 4563.66

47+50

XCEL 6" MILL WRAP
INTERMEDIATE PRESSURE
GAS LINE

48+00

TH 173
XCEL
6"STEEL
D 4.92'
EG 4568.8
T.O.P. 4563.88

48+50

49+00

TH 175
XCEL
6"STEEL
D 4.67'
EG 4569.16
T.O.P. 4564.49

10"PVC SAN

OHP

NO PARKING

~DIRT~

5'WOVEN WIRE FENCE

(ABANDON)
CONC. DITCH

CONC. DITCH

G RD CENTERLINE/CROWN

INV 4568.19

INV 4568.31

INV 4568.17

PNT 40230
F4-241-004
RIM 4567.83
INV E 4561.49
INV W 4561.37

QL-C
C.O.G.J. 10" PVC SANITARY
SEWER INSTALLED 1991

G.V.P. OVERHEAD
POWER LINE AND
CHARTER OVERHEAD
CATV LINE
(BELOW GVP)
LOWER LINE
APPROXIMATELY 15'
ABOVE EX. GROUND
AT SAG

12" CMP CULVERT

12" PVC CULVERT

NOTE:
ALL UTILITIES DEPICTED AT QUALITY LEVEL B (QL-B)
UNLESS OTHERWISE NOTED

ACRONYMS:

C.O.G.J	CITY OF GRAND JUNCTION
G.V.I.C.	GRAND VALLEY IRRIGATION COMPANY
G.V.P.	GRAND VALLEY POWER
G.J.D.D.	GRAND JUNCTION DRAINAGE DISTRICT

2945-042-00-018
Southeast Corner of 24 & G Rd
USHER NV LLC

DESCRIPTION	DATE
REVISION 1 REV 1	– DATE
REVISION 2 REV 2	– DATE
REVISION 3 REV 3	– DATE
REVISION 4 REV 4	– DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

SCALE
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
SUBSURFACE UTILITY
ENGINEERING PLAN – 5

19

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\SUBSURFACE UTILITY ENGINEERING PLAN PH 1.dwg, 4/23/2021 6:43:14 AM

MATCH LINE

MATCH LINE

2701-333-00-152
728 24 RD
CITY OF GRAND JUNCTION

2701-333-01-002
2426 G RD
SHARON ANN MENDICELLI

PNT 40534
G1-241-024
RIM 4568.31
INV N 4562.98
INV S 4562.93

G.V.P. OVERHEAD POWER LINE & CENTURYLINK OVERHEAD TELEPHONE LINE APPROXIMATELY 25' ABOVE EX. GROUND ELEVATION 4570.1 AT POWER POLE

QL-D
12" CMP – WEST END NOT LOCATED

UTE 3/4" TYPE K COPPER WATER SERVICE LINE

CENTURY LINK 1" DIRECT BURY TELEPHONE

QL-C
C.O.G.J. 8" PVC SANITARY SEWER INSTALLED 1995

CENTURY LINK 1" DIRECT BURY TELEPHONE

CENTURY LINK 1" DIRECT BURY TELEPHONE

CENTURY LINK 1" DIRECT BURY TELEPHONE

INV 4568.52
TH 181
TELE
1" DIRECT BURY CABLE
D 1.75'
EG 4569.76
T.O.P. 4568.01

TH 183
TELE
1" DIRECT BURY CABLE
D 3.83'
EG 4570.36
T.O.P. 4566.53

INV 4567.43

INV 4567.59

15" CMP CULVERT
INV 4568.81

INV 4568.84

TH 187
UTE 2" HDPE
D 4.75'
EG 4570.08
T.O.P. 4565.33

TH 188 TELE 1"DIRECT BURY
D 3.17'
EG 4570.16 T.O.P.4567

TH 191
XCEL
3/4"HDPE
D 2.92'
EG 4570.12
T.O.P. 4567.20

TH 180
XCEL
2"HDPE
D 3.08'
EG 4569.80
T.O.P. 4566.72

TH 190
XCEL
2"HDPE
D 4'
EG 4570.80
T.O.P. 4566.80

QL-C
18" PVC IRRIGATION LINE

XCEL 2" PE GAS LINE

TH 185
IRR
10"PVC
4.08 '
EG 4570.45
T.O.P. 4566.37

TH 186
XCEL
3/4"HDPE
D 3.5'
EG 4570.70
T.O.P.4567.20

UTE 2" PVC WATER LINE

G ROAD

QL-C
C.O.G.J. 10" PVC SANITARY SEWER INSTALLED 1991

TH 178
XCEL
6"STEEL
D 3.58'
EG 4570.10
T.O.P. 4566.52

QL-C
15" PVC DRAIN LINE

TH 184
XCEL
6"STEEL
D 3.83'
EG 4570.8
T.O.P. 4566.97

TH 189
XCEL
6"STEEL
D 3.92'
EG 4571.6
T.O.P. 4567.68

G RD CENTERLINE/CROWN

50+00
50+50
51+00
51+50
52+00
52+50

INV 4567.83
INV 4568.10

12" PVC CULVERT
INV 4568.06
INV 4567.96

INV 4566.27

INV 4567.94

INV 4567.80

INV 4568.03

12" PVC CULVERT

INV 4563.22

10" PVC CULVERT

10" CMP CULVERT

INV 4566.84

PNT 40729
F4-241-005
RIM 4570.25
INV N 4562.87
INV E 4562.72
INV W 4562.70

INV 4563.41

G.V.P. OVERHEAD POWER LINE, LOWER LINE APPROXIMATELY 31' ABOVE EX. GROUND ELEVATION 4570.4 AT POWER POLE

G.V.P. OVERHEAD POWER LINE APPROXIMATELY 15' ABOVE EX. GROUND AT SAG

XCEL 6" MILL WRAP INTERMEDIATE PRESSURE GAS LINE

QL-C
C.O.G.J. 10" PVC SANITARY SEWER INSTALLED 1991

UTE 3/4" TYPE K COPPER WATER SERVICE LINE

G.V.P. OVERHEAD POWER LINE & CENTURYLINK OVERHEAD TELEPHONE LINE APPROXIMATELY 15' ABOVE EX. GROUND AT SAG

G.V.P. OVERHEAD POWER LINE AND CHARTER OVERHEAD CATV LINE APPROXIMATELY 15' ABOVE EX. GROUND AT SAG

N
W
E
S

NOTE:
ALL UTILITIES DEPICTED AT QUALITY LEVEL B (QL-B) UNLESS OTHERWISE NOTED

ACRONYMS:
C.O.G.J CITY OF GRAND JUNCTION
G.V.P. GRAND VALLEY POWER
G.J.D.D. GRAND JUNCTION DRAINAGE DISTRICT

2945-042-00-018
Southeast Corner of 24 & G Rd
USHER NV LLC

2945-042-00-075
2427 G RD
USHER NV LLC

DESCRIPTION	DATE
REVISION ⚠ REV 1	– DATE
REVISION ⚠ REV 2	– DATE
REVISION ⚠ REV 3	– DATE
REVISION ⚠ REV 4	– DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

SCALE 0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
SUBSURFACE UTILITY
ENGINEERING PLAN – 6

20

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\SUBSURFACE UTILITY ENGINEERING PLAN PH 1.dwg, 4/23/2021 6:43:17 AM

MATCH LINE

MATCH LINE

G.V.P. OVERHEAD POWER LINE AND CHARTER OVERHEAD CATV LINE APPROXIMATELY 15' ABOVE EX. GROUND AT SAG

12" PVC CULVERT

INV 4568.11

12" PVC (ABANDON)

20' GATE

18" CMP CULVERT

INV 4569.42

INV 4569.41

12" PVC (ABANDON)

INV 4568.39

12" PVC (ABANDON)

2701-333-01-002
2426 G RD
SHARON ANN MENDICELLI

CENTURY LINK 1" DIRECT BURY TELEPHONE

CENTURY LINK 1" DIRECT BURY TELEPHONE

XCEL GAS LINE UNKNOWN SIZE/MATL

5' CHAINLINK

~DIRT~

~DIRT~

~DIRT~

NO PARKING

NO PARKING

TH 196 TELE
1"DIRECT BURY CABLE
D 2.5' EG 4570.95
T.O.P. 4568.45

TH 195
XCEL
2"HDPE
D 4.58'
EG 4571.10
T.O.P. 4566.52

TH 194
UTE
2"PVC
D 4.5'
EG 4571.85
T.O.P. 4567.35

UTE 2" PVC WATER LINE

2" PVC

53+00

53+50

XCEL 2" PE GAS LINE

G ROAD

EX. ASPH.

TH 201 XCEL
3/4"HDPE D 3.67'
EG 4571.40 T.O.P. 4567.73

TH 200
UTE
8"PVC
D 4.42'
EG 4571.75
T.O.P. 4567.33

2" PVC

54+00

54+50

G.V.P. 4" PVC CONDUIT

G RD CENTERLINE/CROWN

TH 193
XCEL
6"STEEL
D 4.17'
EG 4571.96
T.O.P. 4567.79

G.V.P. 4" PVC CONDUIT

TH 197
XCEL
6"STEEL
D 4.25'
EG 4572.26
T.O.P. 4568

TH 198/199 TELE 2EA-4"PVC
D 6.12' EG 4572.45 T.O.P. 4566.33

QL-D
4" PVC WINTER DRAIN LINE FOR IRRIGATION

QL-C
18" HDPE
IRRIGATION LINE

WINTER DRAIN OUT FOR 18"HDPE IRRIGATION TO 30"HDPE STORM

IRR GATE VALVE/RISER

INV 4567.47

4" PVC STM

18" HDPE

2701-333-03-000

~ROCKS~

4" PVC STM

18" HDPE

TH 206 TELE 1"DIRECT BURY
D 4' EG 4571.56 T.O.P. 4567.56

UTE 8" PVC WATER LINE

XCEL 6" MILL WRAP INTERMEDIATE PRESSURE GAS LINE

CENTURY LINK 4" HDPE TELEPHONE

TH 204
XCEL
2"HDPE
D 3.67'
EG 4571.92
T.O.P. 4568.25

55+00

55+50

TH 202
XCEL
6"STEEL
D 4'
EG 4572.22
T.O.P. 4568.22

STOP ST NAME

6.5' D/O C.G.

SPANISH TRAIL DR

30" HDPE STM

8" PVC SAN

8" PVC

6" PVC

4" CURB

QL-C
C.O.G.J. 8" PVC SANITARY SEWER INSTALLED 2001

QL-C
C.O.G.J. 30" HDPE STORM DRAIN

TH 209
UTE
8"PVC
D 4.25'
EG 4571.26
T.O.P. 4567.01

TH 210
TELE
4"HDPE
D 6.42'
EG 4571.22
T.O.P. 4564.80

TH 205 TELE
1"DIRECT BURY
D 2.58' EG 4571.73
T.O.P. 4569.15

TH 212
TELE
4"HDPE
D 7.08'
EG 4572.68
T.O.P. 4565.60

10"PVC SAN

OHP

6" MW

3' BARBED WIRE

~DIRT~

QL-C
C.O.G.J. 10" PVC SANITARY SEWER INSTALLED 1991

G.V.P. OVERHEAD POWER LINE AND CHARTER OVERHEAD CATV LINE APPROXIMATELY 15' ABOVE EX. GROUND AT SAG

G.V.P. OVERHEAD POWER LINE, LOWER LINE APPROXIMATELY 26' ABOVE EX. GROUND ELEVATION 4571.9 AT POWER POLE

PNT 41112
F4-241-006
RIM 4571.71
INV E 4565.26
INV W 4565.23

QL-C
C.O.G.J. 10" PVC SANITARY SEWER INSTALLED 1991

INV 4562.67

G.V.P. OVERHEAD POWER LINE AND CHARTER OVERHEAD CATV LINE APPROXIMATELY 15' ABOVE EX. GROUND AT SAG

PNT 41111
F4-241-012
RIM 4571.93
INV N 4565.60
INV E 4565.49
INV W 4565.38

G.V.P. OVERHEAD POWER LINE AND CHARTER OVERHEAD CATV LINE, LOWER LINE APPROXIMATELY 20' ABOVE EX. GROUND ELEVATION 4571.5 AT POWER POLE

G.V.P. OVERHEAD POWER LINE, LOWER LINE APPROXIMATELY 26' ABOVE EX. GROUND ELEVATION 4571.6 AT POWER POLE

2945-042-00-075
2427 G RD
USHER NV LLC

2945-042-00-076
2449 G RD
USHER NV LLC

N
W
E
S

NOTE:
ALL UTILITIES DEPICTED AT QUALITY LEVEL B (QL-B) UNLESS OTHERWISE NOTED

ACRONYMS:

C.O.G.J	CITY OF GRAND JUNCTION
G.V.P.	GRAND VALLEY POWER
G.J.D.D.	GRAND JUNCTION DRAINAGE DISTRICT

DESCRIPTION	DATE
REVISION ⚠ REV 1	– DATE
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REVISION ⚠ REV 4	– DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

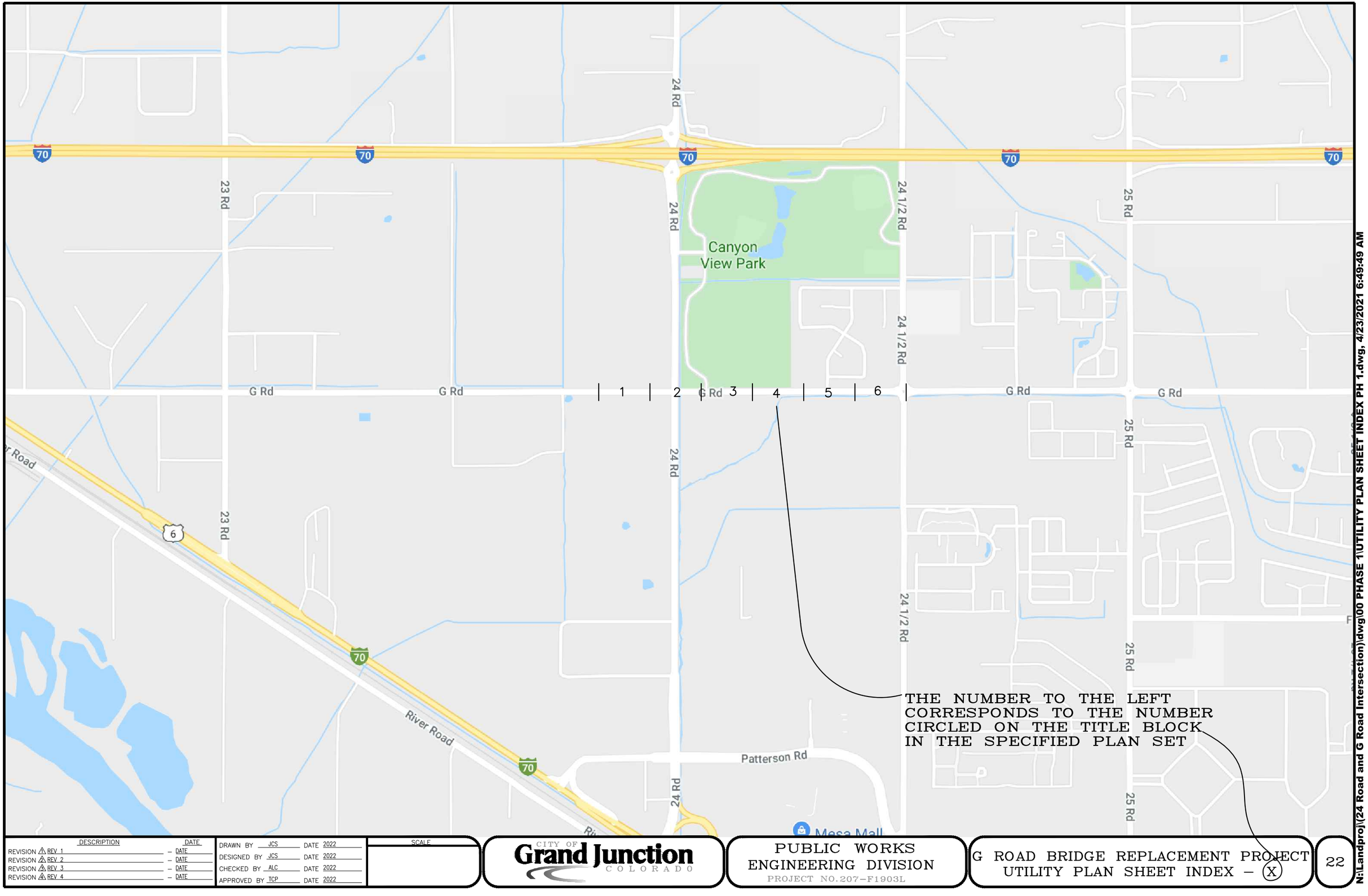
SCALE 0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
SUBSURFACE UTILITY
ENGINEERING PLAN – 7

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\SUBSURFACE UTILITY ENGINEERING PLAN PH 1.dwg, 4/23/2021 6:43:20 AM



DESCRIPTION	DATE
REVISION 1 REV_1	DATE
REVISION 2 REV_2	DATE
REVISION 3 REV_3	DATE
REVISION 4 REV_4	DATE

DRAWN BY	JCS	DATE	2022
DESIGNED BY	JCS	DATE	2022
CHECKED BY	ALC	DATE	2022
APPROVED BY	TCP	DATE	2022

SCALE

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
UTILITY PLAN SHEET INDEX – (X)

22

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\UTILITY PLAN SHEET INDEX PH 1.dwg, 4/23/2021 6:49:49 AM

2701-324-00-093
Northwest Corner of G and 24 Rd
USHER NV LLC

MATCH LINE

MATCH LINE

NEW M.P.E.

EX R.O.W.

G ROAD

G RD CENTERLINE

RELOCATE OVERHEAD POWER TO UNDERGROUND POWER (BY GVP) (UPON COMPLETION OF BRIDGE'S H-PILE INSTALLATION, THE CONTRACTOR SHALL NOTIFY GVP THAT THEY CAN START THEIR INSTALLATION OF TWO 6" DIA. ELECTRIC CONDUITS. GVP PLANS TO BORE THESE TWO NEW ELECTRICAL CONDUITS UNDERNEATH THE PROPOSED NEW BRIDGE AND BETWEEN THE NEW H-PILES)

PROTECT EXISTING WATERLINE

PROTECT EXISTING WATERLINE

PROTECT EXISTING SEWER LINES AND SEWER MANHOLES

EXISTING OVERHEAD POWER LINE TO BE RELOCATED UNDERGROUND BY XCEL ENERGY (PHASE 2) (NOT PART OF CONTRACT)

EX R.O.W.

EX M.P.E.

NEW R.O.W.

NEW M.P.E.

GAS STATION ACCESS

2945-051-18-002
2385 G RD
WDM CORPORATION

2945-051-18-001
2395 G RD
GOLDEN GATE PETROLEUM
OF NEVADA LLC

DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

DRAWN BY	JCS	DATE	2022
DESIGNED BY	JCS	DATE	2022
CHECKED BY	ALC	DATE	2022
APPROVED BY	TCP	DATE	2022

SCALE 0 10 20 40

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
UTILITY PLAN - 1

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\UTILITY PLAN PH 1.dwg, 4/23/2021 6:49:50 AM

MATCH LINE

2701-324-00-093
Northwest Corner of G and 24 Rd
USHER NV LLC

RELOCATE OVERHEAD POWER TO UNDERGROUND POWER (BY GVP) (UPON COMPLETION OF BRIDGE'S H-PILE INSTALLATION, THE CONTRACTOR SHALL NOTIFY GVP THAT THEY CAN START THEIR INSTALLATION OF TWO 6" DIA. ELECTRIC CONDUITS. GVP PLANS TO BORE THESE TWO NEW ELECTRICAL CONDUITS UNDERNEATH THE PROPOSED NEW BRIDGE AND BETWEEN THE NEW H-PILES)

PROPOSED NEW GVP CONCRETE VAULT (V2) (INSTALLED BY GVP) (7' x 7' UNDERGROUND VAULT) (NOT PART OF CONTRACT)

PROPOSED NEW 2" GAS LINE (INSTALLED BY XCEL ENERGY)

RELOCATED STORM DRAIN PIPE (SEE STORM DRAIN PLAN & PROFILE)

2701-333-00-152
728 24 RD
CITY OF GRAND JUNCTION

PROPOSED NEW ¾" COPPER WATER SERVICE TO EXISTING PARK DRINKING FOUNTAIN

2 INCH BROADBAND CONDUIT (PLASTIC) (SCH-40) (INSTALL 10-GAUGE TRACER WIRE PER CITY SPEC AND A PULL ROPE WITHIN THE CONDUIT)

END 2 INCH BROADBAND CONDUIT (PLASTIC) (SCH-40)
N: 50040.56
E: 78897.04

PROPOSED NEW BURIED XCEL ENERGY ELECTRIC LINE (CONTRACTOR SHALL COORDINATE WITH XCEL ENERGY ON CONDUIT INSTALLATION)

NEW M.P.E.
NEW R.O.W.
EX M.P.E.
EX R.O.W.

G ROAD
G RD CENTERLINE /MONUMENT LINE
G RD CENTERLINE/CROWN

EXISTING 2" PE GAS AND 6" I.P. GAS LINE TO BE ABANDONED (BY XCEL ENERGY)

PROPOSED NEW 6" I.P. GAS LINE (INSTALLED BY XCEL ENERGY)

PROPOSED NEW 2" GAS LINE (INSTALLED BY XCEL ENERGY)

PROPOSED NEW 6" I.P. GAS LINE (INSTALLED BY XCEL ENERGY)

24 RD CENTERLINE
24 ROAD
LEACH CREEK
NORTH LEACH CREEK

PROPOSED NEW CENTURY LINK AND CHARTER UTILITIES (COMMON TRENCH) (CITY CONTRACTOR PROVIDES TRENCHING AND UTILITY OWNER'S WILL INSTALL CONDUITS) (SEE BRIDGE UTILITY PLANS FOR JOINT TRENCH DETAIL)

RELOCATED WATERLINE (SEE WATERLINE PLAN & PROFILE)

RELOCATED SANITARY SEWER (SEE SANITARY SEWER PLAN & PROFILE)

RELOCATED STORM DRAIN (SEE STORM DRAIN PLAN & PROFILE)

2945-051-18-001
2395 G RD
GOLDEN GATE PETROLEUM OF NEVADA LLC

2945-042-00-018
Southeast Corner of 24 & G Rd
USHER NV LLC

MATCH LINE

DESCRIPTION	DATE
REVISION ⚠ REV_1	– DATE
REVISION ⚠ REV_2	– DATE
REVISION ⚠ REV_3	– DATE
REVISION ⚠ REV_4	– DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

SCALE 0 10 20 40

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
UTILITY PLAN – 2

24

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\UTILITY PLAN PH 1.dwg, 4/23/2021 6:49:58 AM

2701-333-00-152
728 24 RD
CITY OF GRAND JUNCTION

N
W E
S

CANYON VIEW PARK

CANYON VIEW PARK INGRESS/EGRESS

MATCH LINE

MATCH LINE

PROPOSED NEW ¾" COPPER WATER SERVICE TO EXISTING PARK DRINKING FOUNTAIN

NEW WATER METER PIT LOCATION
N: 50041.30
E: 79152.30

PROPOSED NEW GVP CONCRETE VAULT (V3) (VAULT SUPPLIED BY GVP AND INSTALLED BY CITY CONTRACTOR) (7' x 7' UNDERGROUND VAULT) (GVP'S CONDUIT BORING OPERATION WILL END AT VAULT V3)

LIGHTING CONTROL CENTER (PP1) AND THE LIFT STATION CONTROLS FOR THE BRIDGE'S DEWATERING PUMP SYSTEM (SEE ELECTRICAL PLANS AND THE BRIDGE'S DEWATERING PUMP SYSTEM FOR DETAILS)

EXISTING XCEL ENERGY ELECTRICAL CABINET (REMAIN IN PLACE)

BROADBAND PULL BOX (30"x48"x24") (3048 POLYMER CONCRETE SERIES – TIER 22) (SPLIT LID STYLE)

RELOCATED CENTURY LINK UTILITY (CITY CONTRACTOR PROVIDES TRENCHING AND CENTURY LINK WILL INSTALL CONDUIT)

RELOCATED STORM DRAIN (SEE STORM DRAIN PLAN & PROFILE)

RELOCATE 6" I.P. GAS LINE TO ALLOW INSTALLATION OF NEW 18" STORM DRAIN PIPE (BY XCEL ENERGY) (SEE STORM DRAIN PLAN & PROFILE)

RELOCATE/REMOVE OVERHEAD POWER (BY GVP) (NOT PART OF CONTRACT)

PROPOSED JOINT UTILITY TRENCH LOCATION FOR GVP AND CHARTER (UTILITY OWNER'S WILL PROVIDE CONDUITS AND VAULTS FOR THE CITY'S CONTRACTOR TO INSTALL) (CONDUITS INCLUDE TWO 6" DIA. CONDUITS FOR GVP AND TWO 2" DIA. CONDUITS FOR CHARTER)

RELOCATED WATERLINE (SEE WATERLINE PLAN & PROFILE)

EX R.O.W.

G ROAD

G RD CENTERLINE/CROWN

NEW R.O.W.

NEW M.P.E.

40+50 41+00 41+50 42+00 42+50 43+00 43+50 44+00 44+50 45+00 45+50

2945-042-00-018
Southeast Corner of 24 & G Rd
USHER NV LLC

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REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
UTILITY PLAN – 3

25

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\UTILITY PLAN PH 1.dwg, 4/23/2021 6:50:06 AM

2701-333-00-152
728 24 RD
CITY OF GRAND JUNCTION

2701-333-01-002
2426 G RD
SHARON ANN MENDICELLI

MATCH LINE

MATCH LINE

G ROAD

EX R.O.W.

EX R.O.W.

G RD CENTERLINE/CROWN

NEW R.O.W.

NEW R.O.W.

NEW M.P.E.

NEW U.E.

RELOCATED WATERLINE (SEE WATERLINE PLAN & PROFILE)

PROPOSED NEW GVP CONCRETE VAULT (V5) (VAULT INSTALLED BY GVP) (7' x 7' UNDERGROUND VAULT) (NOT PART OF CONTRACT)

PROPOSED NEW GVP CONCRETE VAULT (V4) (VAULT SUPPLIED BY GVP AND INSTALLED BY CITY CONTRACTOR) (7' x 7' UNDERGROUND VAULT)

PROPOSED JOINT UTILITY TRENCH LOCATION FOR GVP AND CHARTER (UTILITY OWNER'S WILL PROVIDE CONDUITS AND VAULTS FOR THE CITY'S CONTRACTOR TO INSTALL) (CONDUITS INCLUDE TWO 6" DIA. CONDUITS FOR GVP AND TWO 2" DIA. CONDUITS FOR CHARTER)

RELOCATE/REMOVE OVERHEAD POWER (BY GVP) (NOT PART OF CONTRACT)

END CONDUIT INSTALLATION FOR GVP AND CHARTER (STA 49+60)

RELOCATED UNDERGROUND UTILITIES FOR GVP AND CHARTER (INSTALLED BY GVP AND CHARTER) (NOT PART OF CONTRACT)

2945-042-00-018
Southeast Corner of 24 & G Rd
USHER NV LLC

2945-042-00-075
2427 G RD
USHER NV LLC

DESCRIPTION	DATE
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REVISION 2 REV 2	– DATE
REVISION 3 REV 3	– DATE
REVISION 4 REV 4	– DATE

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DESIGNED BY JCS DATE 2022
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APPROVED BY TCP DATE 2022

SCALE 0 10 20 40

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
UTILITY PLAN – 4

26

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\UTILITY PLAN PH 1.dwg, 4/23/2021 6:50:13 AM

2701-333-01-002
2426 G RD
SHARON ANN MENDICELLI

2701-333-04-001
2427 ROAN RIDGE RD
NOAH DWAYNE DODD

2701-333-04-002
2429 ROAN RIDGE RD
ALISHA L SMITH

2701-333-04-003
2431 ROAN RIDGE RD
KATHLEEN TADVICK-MAWHINNEY

2701-333-04-004
2433 ROAN RIDGE RD
MARIA RAMIREZ

2701-333-04-005
2435 ROAN RIDGE RD
DEBRA D JENSEN

2701-333-04-006
2437 ROAN RIDGE RD
JOANA M HUGUS

SPANISH TRAIL DR

G ROAD

PROPOSED NEW GVP CONCRETE VAULT (V6)
(VAULT INSTALLED BY GVP)
(7' x 7' UNDERGROUND VAULT)
(NOT PART OF CONTRACT)

RELOCATED UNDERGROUND UTILITIES FOR GVP AND CHARTER (INSTALLED BY GVP AND CHARTER) (NOT PART OF CONTRACT)

EX EASEMENT

NEW R.O.W.

NEW U.E.

EX R.O.W.

G RD CENTERLINE/CROWN

NEW R.O.W.

NEW M.P.E.

RELOCATED WATERLINE
(SEE WATERLINE PLAN & PROFILE)

RELOCATE/REMOVE
OVERHEAD POWER (BY GVP)
(NOT PART OF CONTRACT)

MATCH LINE

MATCH LINE

2945-042-00-075
2427 G RD
USHER NV LLC

2945-042-00-076
2449 G RD
USHER NV LLC

DESCRIPTION	DATE
REVISION ⚠ REV 1	– DATE
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REVISION ⚠ REV 4	– DATE

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SCALE 0 10 20 40

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
UTILITY PLAN – 5

27

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\UTILITY PLAN PH 1.dwg, 4/23/2021 6:50:20 AM

MATCH LINE

2701-333-04-007
2439 ROAN RIDGE RD
BENJAMEN BLEHM

2701-333-04-008
2441 ROAN RIDGE RD
ROBERT W BORUTA

2701-333-04-009
2443 ROAN RIDGE RD
CYDNE SIMONS

2701-333-04-010
2445 ROAN RIDGE RD
ERNESTO ZEBADA JR

2701-333-04-011
2447 ROAN RIDGE RD
TIFFANY PEHL

2701-333-00-147
701 24 1/2 ROAD
RIVER OF LIFE ALLIANCE CHURCH

24 1/2 RD

PROPOSED NEW GVP CONCRETE VAULT (V7)
(VAULT INSTALLED BY GVP)
(7' x 7' UNDERGROUND VAULT)
(NOT PART OF CONTRACT)

RELOCATED UNDERGROUND UTILITIES FOR GVP AND CHARTER (INSTALLED BY GVP AND CHARTER) (NOT PART OF CONTRACT)

EX R.O.W.

G ROAD

G RD CENTERLINE/CROWN

NEW R.O.W.

NEW M.P.E.

RELOCATE/REMOVE
OVERHEAD POWER (BY GVP)
(NOT PART OF CONTRACT)

58+50 | 59+00 | 59+50 | 60+00 | 60+50 | 61+00 | 61+50 | 62+00 | 62+50 | 63+00 | 63+50

2945-042-00-076
2449 G RD
USHER NV LLC

MATCH LINE

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REVISION ⚠3 REV 3	– DATE
REVISION ⚠4 REV 4	– DATE

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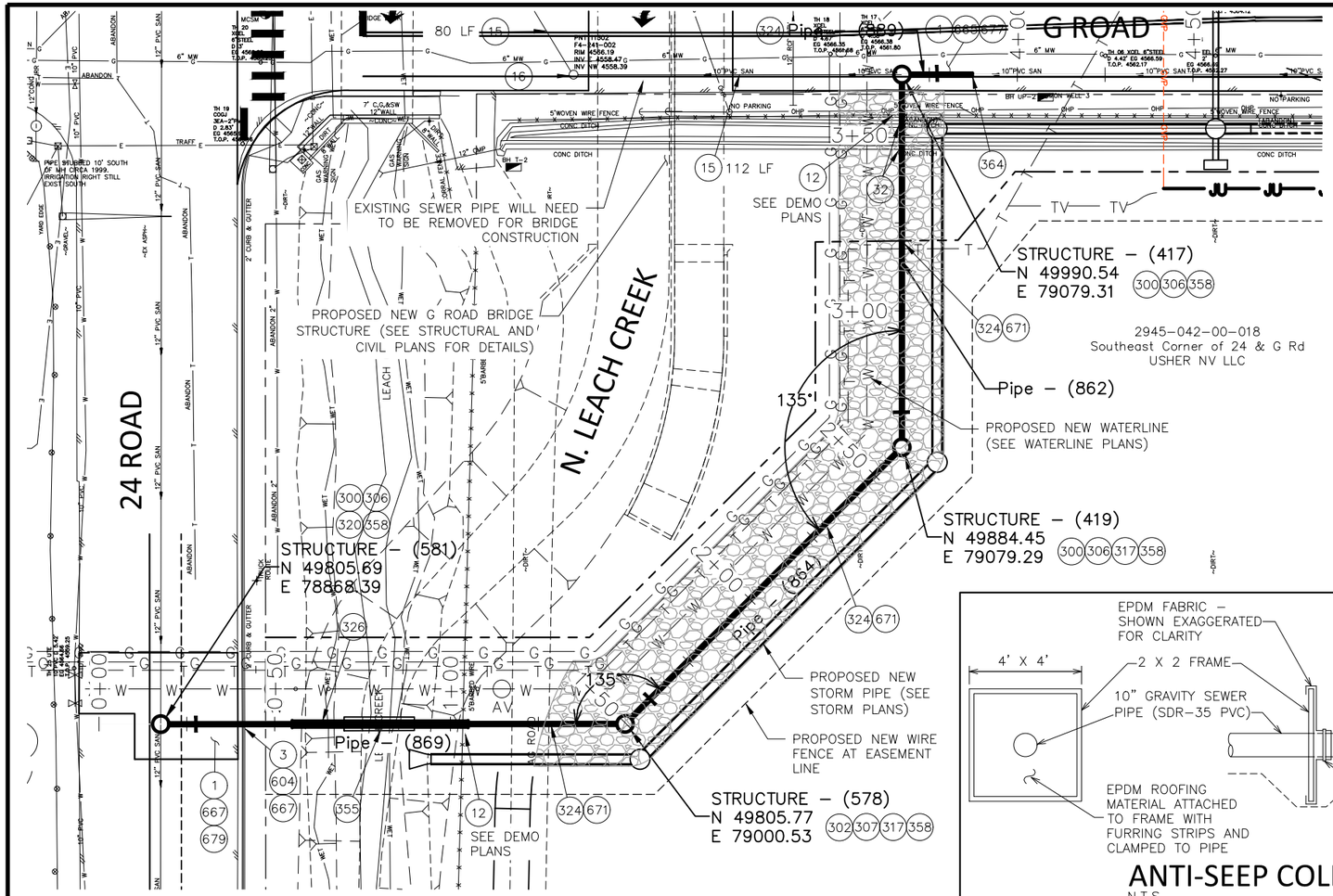
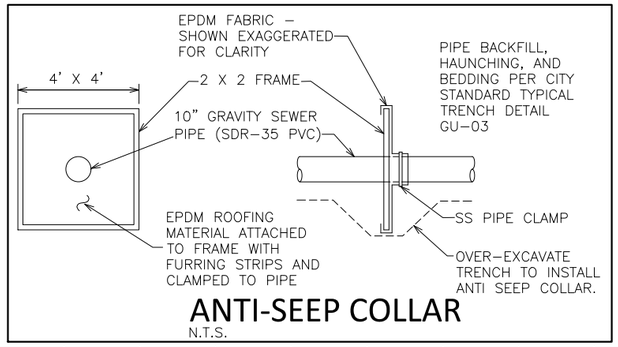
SCALE 0 10 20 40

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
UTILITY PLAN – 6





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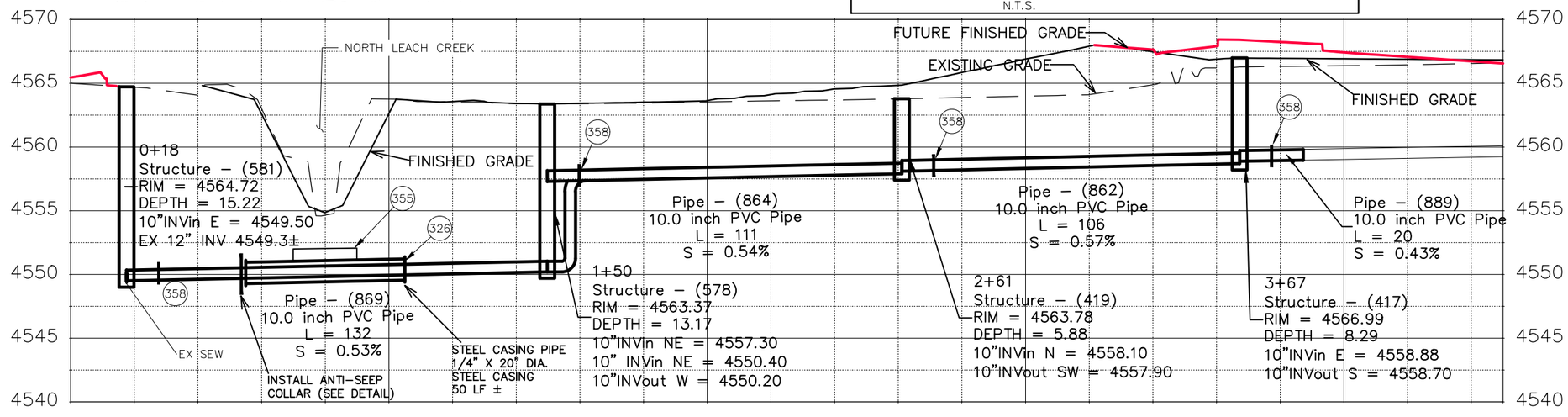

CONSTRUCTION NOTES

(1) 202 – REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)

(3) 202 – REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN)

(12) 202 – REMOVAL OF FENCE AS SHOWN. (HEIGHT AND MATERIAL AS SHOW ON PLAN)

(15) 202 – REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)

(16) 202 – REMOVAL OF MANHOLE

(20) 202 – ABANDON PIPE. ABANDON PIPE BY PLUGGING REMAINING ENDS WITH CONCRETE.

(32) 202 – REMOVE EXISTING CONCRETE IRRIGATION DITCH.

(300) 102.11/108.5 – SANITARY SEWER BASIC MANHOLE (48" I.D.). INCLUDES EXTERIOR MANHOLE WATERPROOFING AS PER 102.11, CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY STD. DETAIL SS–02).

(302) 102.11/108.5 – SANITARY SEWER BASIC DROP MANHOLE (48" I.D.). INCLUDES EXTERIOR MANHOLE WATERPROOFING AND MANHOLE CORROSION PROTECTION AS PER 102.11, CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY STD. DETAIL SS–04).

(306) 102.11/108.5 – MANHOLE BARREL SECTION (D>5') (48" I.D.)

(307) 102.11/108.5 – DROP MANHOLE BARREL SECTION (D>5') (48" I.D.)

(317) 104.20 – INSTALL CONCRETE COLLAR W/ #4 REBAR HOOP AS PER STD. DETAIL SS–02. INCIDENTAL TO MANHOLE PAY ITEM.

(320) 102.11/108.5 – CONNECT MANHOLE TO EXISTING SANITARY SEWER (12" PVC PIPE) USING A CAST–IN–PLACE BASE SECTION PER CITY STD. DETAIL SS–02. RUBBER "O" RING GASKETS OR APPROVED WATER STOPS TO BE PLACED AT PIPE PENETRATIONS. CARE SHOULD BE TAKEN SO THE EXISTING LINE DOES NOT SAG OR FLOAT DURING CONSTRUCTION OF THE BASE.

(324) 102.9/108.2 – 10" GRAVITY SEWER PIPE (SDR 35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

(326) 20" STEEL CASING PIPE W/ CASING SPACERS AND END CAPS (¼" THICK STEEL PIPE) (CASCADE WATERWORKS CASING SPACERS AND RESTRAINED CASING SPACERS OR ENGINEER APPROVED EQUAL) (6–FOOT SUPPORT SPACING) (SEE CITY STD. DETAIL GU–07)

(355) 104.40 – CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU–04. (AT NORTH LEACH CREEK CROSSING)

(358) 103 – CLAY CUT–OFF WALL (INCIDENTAL TO SEWER INSTALLATION PAY ITEM)

(364) CONNECT TO EXISTING SEWER PIPE. THE CONTRACT PRICE FOR SEWER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE

(604) 608.06 – CONCRETE CURB AND GUTTER (2'–6" WIDE) (MATCH IN KIND)

(665) 304 – AGGREGATE BASE COURSE (CLASS 6) (12" THICK) (G ROAD)

(667) 304 – AGGREGATE BASE COURSE (CLASS 6) (18" THICK) (24 ROAD)

(671) 304 – WASHED ROCK SURFACE COURSE FOR GRAVEL DRIVEWAYS. THICKNESS IS 2" MIN. 3" MAX.

(677) 401.08 – HOT BITUMINOUS PAVEMENT (PATCHING) (4" THICK) (GRADING SX, PG 64–22) (GYR. = 75) (TWO 2" LIFTS) (G ROAD ONLY)

(679) 401.08 – HOT BITUMINOUS PAVEMENT (PATCHING) (6" THICK) (GRADING SX, PG 64–22) (GYR. = 75) (THREE 2" LIFTS) (T–TOP) (24 ROAD ONLY)

Know what's below. Call before you dig.

DESCRIPTION	DATE
REVISION 1 REV 1	– DATE
REVISION 2 REV 2	– DATE
REVISION 3 REV 3	– DATE
REVISION 4 REV 4	– DATE

DRAWN BY JCS DATE 2022
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APPROVED BY TCP DATE 2022

SCALES: PLAN & PROFILE HORIZONTAL 0 20 40 VERTICAL 0 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207–F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
SANITARY SEWER PLAN AND PROFILE – 1

29

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GENERAL NOTES:

1. CONTRACTOR SHALL PROCURE AND CONFORM TO ALL CONSTRUCTION PERMITS REQUIRED.

2. PRIOR TO THE COMMENCEMENT OF WATERLINE CONSTRUCTION, THE CONTRACTOR SHALL GIVE UTE WATER CONSERVANCY DISTRICT (970-242-7491, CONTACT DAVE PRISKE), 48 HOURS ADVANCED NOTICE. THE CONTRACTOR SHALL ATTEND A MANDATORY PRE-CONSTRUCTION MEETING WITH UTE WATER AND THE PROJECT ENGINEER PRIOR TO THE START OF ANY WATERLINE CONSTRUCTION.

3. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 48 HOURS PRIOR TO START OF CONSTRUCTION AND COMPLY WITH ALL UTILITY LOCATE REQUIREMENTS.

4. THE CONTRACTOR SHALL KEEP TWO SETS OF CONTRACT DRAWINGS MARKED UP TO FULLY INDICATE AS-BUILT CONDITIONS. ONE COPY SHALL BE PROVIDED TO THE UTE WATER DISTRICT UPON COMPLETION OF THIS WORK. PROJECT ENGINEER TO PROVIDE THE UTE WATER DISTRICT WITH A DIGITAL COPY OF THE AS-BUILT DRAWINGS UPON COMPLETION.

5. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO UTE WATER DISTRICT STANDARD SPECIFICATIONS. ALL REFERENCES ON THIS SHEET PERTAIN TO THE UTE WATER STANDARD TECHNICAL SPECIFICATIONS, which are available at http://www.utewater.org.

6. THE LOCATION AND DESCRIPTION OF EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY NOR THE COMPLETENESS OF SUCH RECORDS. CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION IN THEIR RESPECTIVE AREAS. WHERE NEW FACILITIES CROSS AND A GRADE OR ALIGNMENT MODIFICATION IS NECESSARY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION.

7. ALL EXISTING FACILITIES ARE TO BE MAINTAINED IN-PLACE BY THE CONTRACTOR UNLESS OTHERWISE SHOWN OR DIRECTED. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO SUPPORT, MAINTAIN, OR OTHERWISE PROTECT EXISTING UTILITIES AND OTHER FACILITIES AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR TO LEAVE EXISTING FACILITIES IN AN EQUAL OR BETTER THAN ORIGINAL CONDITION AND TO THE SATISFACTION OF THE UTILITIES AND ENGINEER.

8. ALL REQUIRED EXCAVATION MATERIAL NOT MEETING THE REQUIREMENTS FOR BACKFILL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE.

9. UTE WATER DISTRICT PERSONNEL WILL OPERATE ALL VALVES ON THE EXISTING WATERLINE MAINS.

10. THE WORK SHALL BE PERFORMED IN A MANNER DESIGNED TO MAINTAIN EXISTING WATER SERVICE. SERVICE TO ANY MAIN LINE OR BUILDING SHALL NOT BE INTERRUPTED FOR MORE THAN TWO (2) HOURS ON ANY GIVEN DAY. CONTRACTOR SHALL NOTIFY UTE WATER AND ALL AFFECTED RESIDENCES AND BUSINESSES A MINIMUM OF 24 HOURS PRIOR TO ANY INTERRUPTED SERVICE.

11. THE CONTRACTOR IS RESPONSIBLE TO PROTECT ALL EXPOSED WATER AND SEWER MAINS AND SERVICES DURING CONSTRUCTION.

12. NO TRENCHES SHALL BE LEFT IN AN OPEN CONDITION OVERNIGHT. ALL TRENCHES SHALL BE CLOSED BEFORE THE END OF EACH WORKING DAY AND NORMAL TRAFFIC FLOWS RESTORED. CONTRACTOR SHALL COMPLETE EACH DAY'S PIPELINE INSTALLATION TO A FINISHED CONDITION BEFORE LEAVING THE JOB SITE FOR THE DAY. THE ONLY EXCEPTION WOULD BE THE ASPHALT CONCRETE RESTORATION WHICH SHALL FOLLOW AS SOON AS PRACTICAL.

13. CONTRACTOR SHALL FURNISH ALL MATERIALS, INCLUDING PIPE, PIPE FITTINGS, VALVES, VALVE BOXES, CUSTOMER SERVICE PIPING, FIRE HYDRANT ASSEMBLIES, BOLTS, GASKETS, POLYETHELENE ENCASEMENT MATERIALS, ALL LABOR, EQUIPMENT, PIPE BEDDING, PIPE ZONE, AND PIPE TRENCH BACKFILL MATERIAL, AND ALL SURFACE RESTORATION MATERIALS INCLUDING REPLACEMENT OF CONCRETE AND OF ASPHALT CONCRETE. CONTRACTOR SHALL ALSO FURNISH THE TRAFFIC CONTROL AND BE RESPONSIBLE FOR UTILITY LOCATES.

PIPE CONSTRUCTION NOTES:

1. CHLORINATE, FLUSH, PRESSURE TEST, AND OBTAIN APPROVED BACTERIA TEST PRIOR TO COMPLETING TIE-INS TO EXISTING LINES AND SERVICES. THE CONTRACTOR SHALL USE A TYPE "A" BLOWOFF ASSEMBLY OR ENGINEER APPROVED EQUAL. THE COST FOR PROVIDING FLUSHING MATERIALS PER THE TYPE "A" BLOWOFF DETAIL WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE WATERLINE WORK.

2. TRENCH CLASSIFICATION AND SURFACE RESTORATION REQUIREMENTS SHALL BE AS CALLED OUT IN THE DRAWING AND DEFINED UNDER SPECIFICATIONS SECTION 02226

3. COMPACTION REQUIREMENTS SHALL BE CALLED OUT ON THE DRAWINGS AND DEFINED UNDER SPECIFICATIONS SECTION 02226, PARAGRAPH 3.09.

4. ALL MAINLINE WATER MAINS 4" – 12" SHALL BE PVC C-900 (DR-18) PER ASTM D1784, ASTM F477, AND ASTM D3139.

5. ALL DUCTILE IRON PIPE & FITTINGS SHALL BE CEMENT MORTAR-LINED WITH ASPHALTIC COATINGS, POLYETHYLENE ENCASEMENT, AND FULLY RESTRAINED JOINTS W/ COR-BLUE T-BOLTS & NUTS. MINIMUM PRESSURE CLASS 250 AND IN ACCORDANCE WITH THE LATEST REVISION OF AWWA.

6. ALL PVC PIPE SHALL BE AWWA C900 OR C905 DR18 WITH DUCTILE IRON PIPE FITTINGS IN ACCORDANCE WITH PIPELINE CONSTRUCTION NOTE 5 ABOVE AND THE LATEST REVISION OF AWWA.

7. ALL VALVES SHALL MEET THE MINIMUM REQUIREMENTS OF AWWA THE LATEST REVISION AND BE NSF/ANSI 61 COMPLIANT. ALL VALVES SHALL BE EPOXY COATED AND LINED. ALL VALVES SHALL BE SUITABLE FOR DIRECT BURY WITH THE EXCEPTION OF THE AR/AV VALVES. SUBMIT RESULTS OF ALL QA/QC VERIFICATION TESTS PER AWWA. INSTALL PER MANUFACTURER'S WRITTEN PROCEDURES.

8. ALL PIPE, VALVES, FITTINGS, AND PIPELINE APPURTENANCES SHALL BE SUITABLE FOR A WORKING PRESSURE OF 105 PSI; TEST PRESSURE OF 150 PSI; AND A SURGE PRESSURE OF 235 PSI. REQUIRED TEST PRESSURE APPLIES AT LOWEST POINT (ELEVATION) BETWEEN STATIONS INDICATED.

9. TONING (TRACING) WIRE PER SECTION 02667 SHALL BE SECURELY ATTACHED ALONG THE PIPE CENTERLINE AND EXTENDED INTO EACH VALVE BOX OR CATHODIC TEST STATION.

10. ALL BOLTS, NUTS, AND WASHERS EXCEPT PER NOTE 5 ABOVE SHALL BE ASTM A193 GR B8 (STAINLESS STEEL).

11. ALL WATER SERVICE PIPING SIZES 3/4" – 1" SHALL BE SEAMLESS TYPE "K" COPPER CONFORMING TO AWWA C-800, 160 PSI RATED.

12. ALL WATER SERVICE PIPING SIZES 1-1/2" – 3" SHALL BE SCHEDULE 40 PVC PIPE CONFORMING TO ASTM D1785.

13. WHERE THE EXCAVATION IS FOUND TO CONSIST OF MUCK, ORGANIC MATTER OR ANY OTHER MATERIAL THAT IS DETERMINED, BY THE PROJECT ENGINEER, TO BE UNSUITABLE FOR SUPPORTING AND MAINTAINING THE LINE AND GRADE OF THE PIPE, THE TRENCH SHALL BE EXCAVATED TO AN ADDITIONAL DEPTH AS DIRECTED BY THE PROJECT ENGINEER AND REPLACED WITH AN APPROVED TRENCH STABILIZATION MATERIAL.

14. THE FOLLOWING LIST OF MATERIALS AND ITEMS OF WORK WILL BE CONSIDERED INCIDENTAL TO THE WATERLINE WORK AND WILL NOT BE MEASURED OR PAID FOR SEPARATELY.
    - 14.1.1. PLUGGING/ABANDONING THE EXISTING WATERLINE WHERE CUTS ARE MADE WITH CLASS B CONCRETE.
    - 14.1.2. ENCASE AND/OR CAPPING THE EXISTING SANITARY SEWER PIPE AT WATERLINE CROSSINGS WITH CLASS B CONCRETE PER UTE WATER'S STANDARD DETAIL.

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SEE PLAN FOR SCALE INFO

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
UTE WATER GENERAL NOTES

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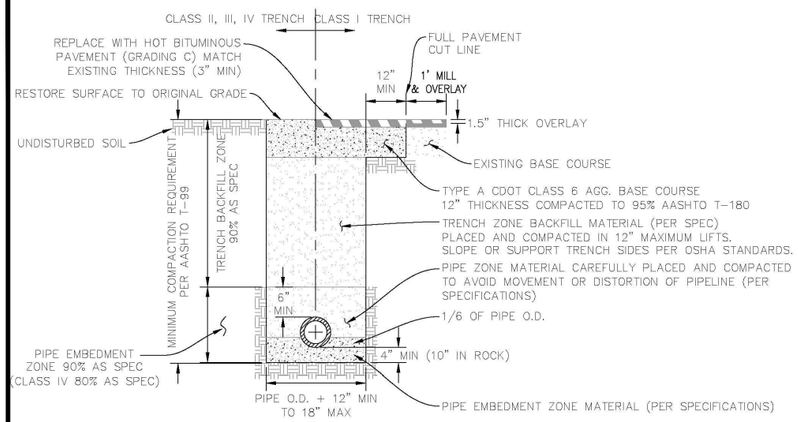
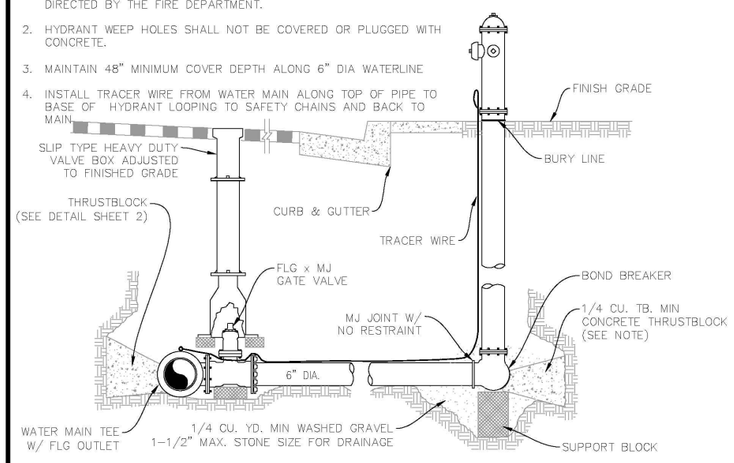
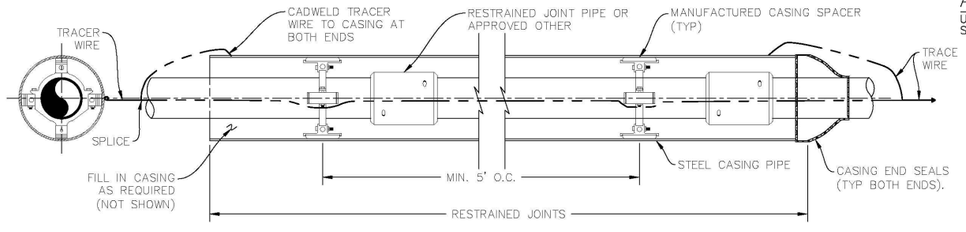


TRENCH DETAIL (A)
UTE WATER STANDARD DETAILS
SCALE: NTS

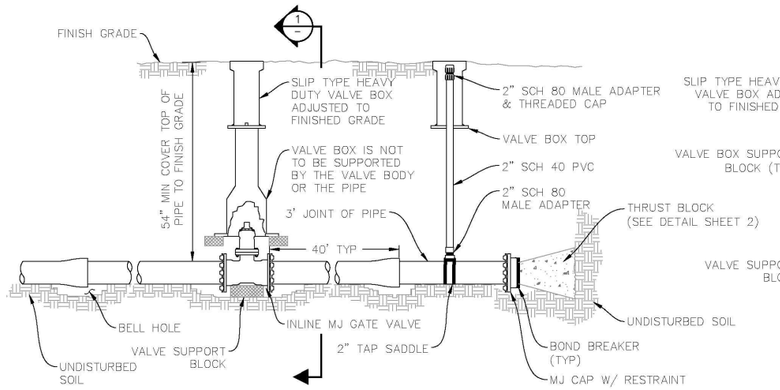
NOTES:
1. FIRE HYDRANTS ARE TO BE PLACED AS SHOWN ON DRAWINGS OR AS DIRECTED BY THE FIRE DEPARTMENT.
2. HYDRANT WEEP HOLES SHALL NOT BE COVERED OR PLUGGED WITH CONCRETE.
3. MAINTAIN 48" MINIMUM COVER DEPTH ALONG 6" DIA WATERLINE
4. INSTALL TRACER WIRE FROM WATER MAIN ALONG TOP OF PIPE TO BASE OF HYDRANT LOOPING TO SAFETY CHAINS AND BACK TO MAIN



FIRE HYDRANT DETAIL (D)
UTE WATER STANDARD DETAILS
SCALE: NTS

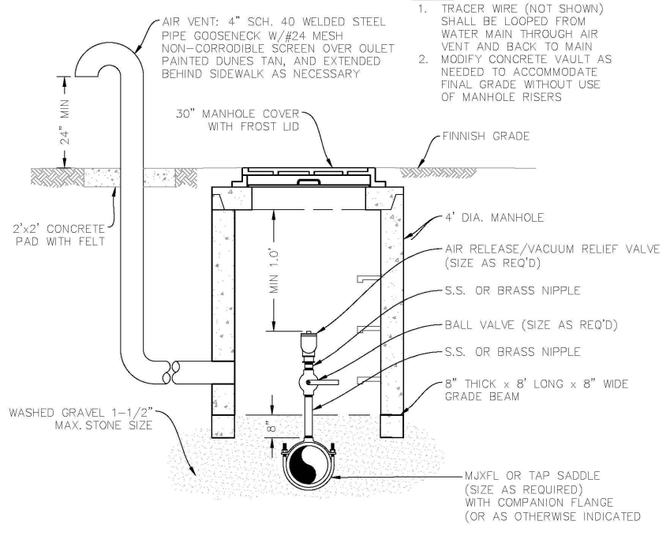


PIPLINE ENCASEMENT DETAIL (G)
UTE WATER STANDARD DETAILS
SCALE: NTS



VALVE INSTALLATION, LINE TERMINATION & TYPE "A" BLOWOFF (B)
UTE WATER STANDARD DETAILS
SCALE: NTS

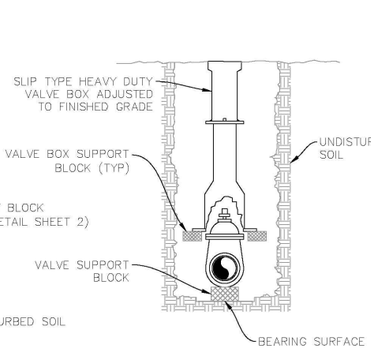
NOTES:
1. TRACER WIRE (NOT SHOWN) SHALL BE LOOPED FROM WATER MAIN THROUGH AIR VENT AND BACK TO MAIN
2. MODIFY CONCRETE VAULT AS NEEDED TO ACCOMMODATE FINAL GRADE WITHOUT USE OF MANHOLE RISERS



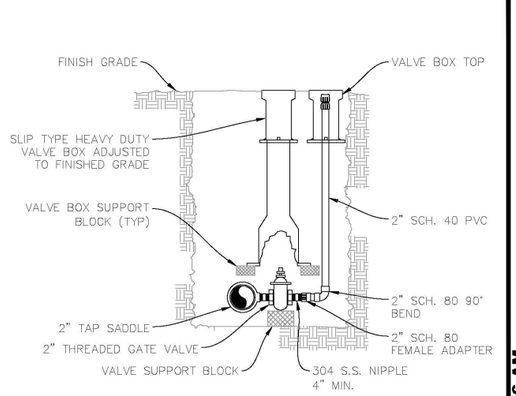
AIR RELEASE VALVE DETAIL (E)
UTE WATER STANDARD DETAILS
SCALE: NTS

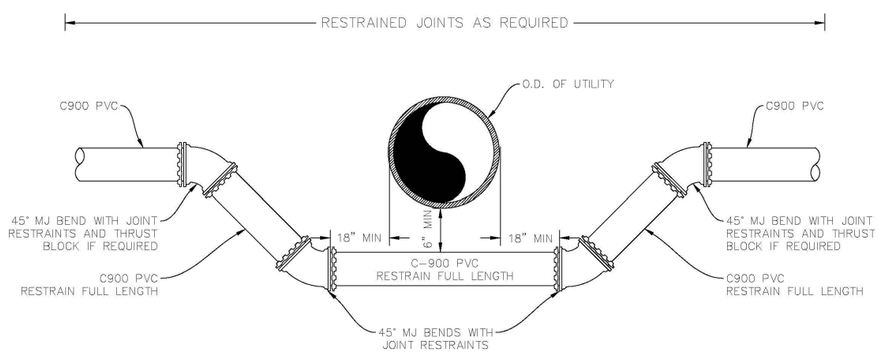
NOTE:
1. CONCRETE WITH FIBER MESH REQUIRED FOR SEWER LINE ENCASEMENT ABOVE WATER LINE.
2. CONCRETE COLLAR OR ENCASEMENT SHALL BE A MINIMUM OF 6" THICK ON ALL SIDES OF SEWER LINE.

VALVE SECTION (1)
SCALE: NTS

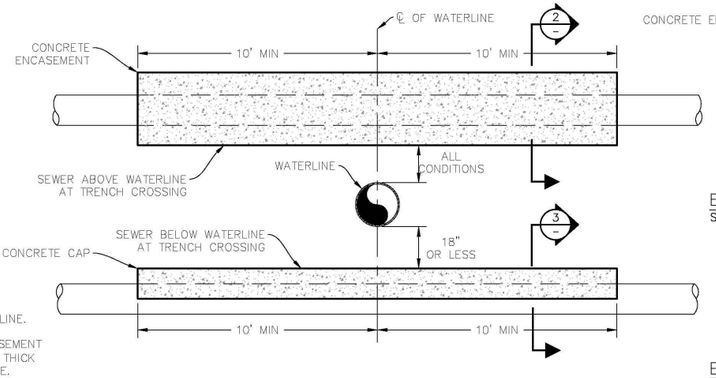


TYPE "B" BLOWOFF DETAIL (C)
UTE WATER STANDARD DETAILS
SCALE: NTS

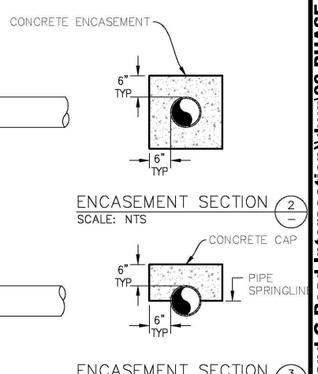




TRENCH CROSSING UNDER UTILITY (F)
UTE WATER STANDARD DETAILS
SCALE: NTS



TRENCH CROSSING OF SEWER (H)
UTE WATER STANDARD DETAILS
SCALE: NTS



ENCASEMENT SECTION (2)
SCALE: NTS

ENCASEMENT SECTION (3)
SCALE: NTS

DESCRIPTION	DATE
REVISION 1 REV 1	– DATE
REVISION 2 REV 2	– DATE
REVISION 3 REV 3	– DATE
REVISION 4 REV 4	– DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

NO SCALE

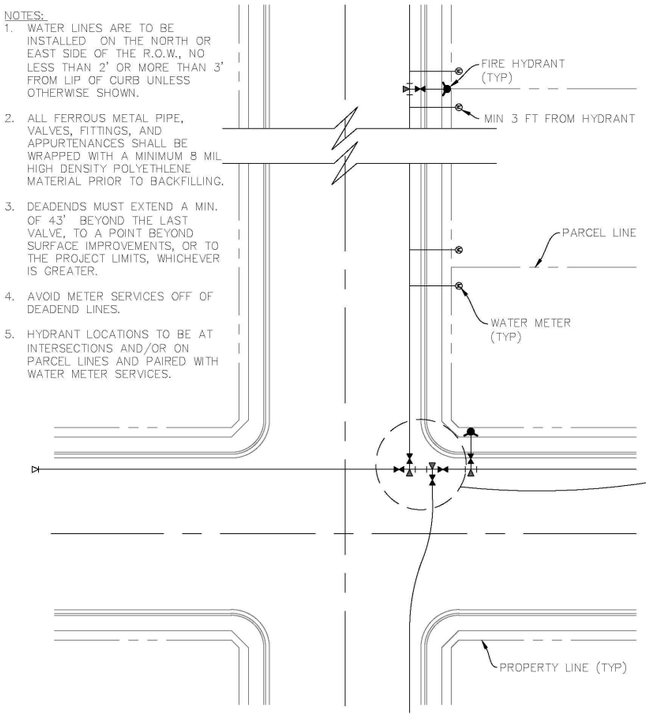
CITY OF Grand Junction COLORADO

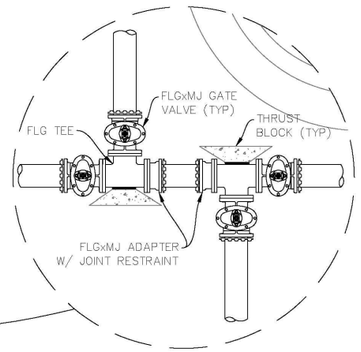
PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
UTE WATER STANDARD DETAILS – 1

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\UTE WATER STANDARD DETAILS.dwg, 4/23/2021 6:56:36 AM

NOTES:
1. WATER LINES ARE TO BE INSTALLED ON THE NORTH OR EAST SIDE OF THE R.O.W., NO LESS THAN 2' OR MORE THAN 3' FROM LIP OF CURB UNLESS OTHERWISE SHOWN.
2. ALL FERROUS METAL PIPE, VALVES, FITTINGS, AND APPURTENANCES SHALL BE WRAPPED WITH A MINIMUM 8 MIL HIGH DENSITY POLYETHLENE MATERIAL PRIOR TO BACKFILLING.
3. DEADENDS MUST EXTEND A MIN. OF 43' BEYOND THE LAST VALVE, TO A POINT BEYOND SURFACE IMPROVEMENTS, OR TO THE PROJECT LIMITS, WHICHEVER IS GREATER.
4. AVOID METER SERVICES OFF OF DEADEND LINES.
5. HYDRANT LOCATIONS TO BE AT INTERSECTIONS AND/OR ON PARCEL LINES AND PAIRED WITH WATER METER SERVICES.





TYPICAL TRACT PLAN (1)
UTE WATER STANDARD DETAILS
SCALE: NTS

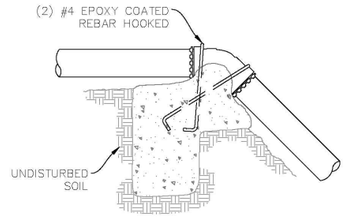
TABLE FOR CONCRETE THRUST BLOCKING

BEARING AREAS (IN SQ. FT.)				
SIZE	BENDS			TEE BRANCH SIZE AND DEAD ENDS
	90°	45°	22 1/2°	
6	4.0	2.2	1.1	2.8
8	7.1	3.8	2.0	5.0
10	11.1	6.0	3.0	7.8
12	16.0	8.6	4.4	11.3
14	21.7	11.8	6.0	15.4
16	28.4	15.3	8.0	20.0
FIRE HYDRANT THRUST BLOCKS SHALL BE A MIN OF 1/4 CU. YD. IN MASS AND HAVE A MIN BEARING AREA OF 5 SQ. FT.				

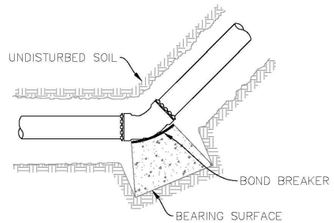
AREAS GIVEN ARE BASED ON INTERNAL STATIC PRESSURE OF 100 P.S.I. AND SOIL BEARING CAPACITY OF 1,000 lbs. PER SQ. FT.

AREAS FOR ANY PRESSURE AND SOIL BEARING CAPACITY MAY BE OBTAINED BY MULTIPLYING TABULATED VALUES BY A CORRECTION FACTOR "F"

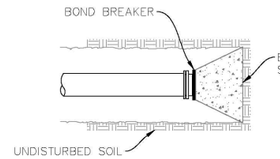
F = ACTUAL SPECIFIED TEST PRESSURE IN HUNDREDS OF lbs PER SQ. INCH. / ACTUAL SOIL BEARING CAPACITY IN THOUSANDS OF lbs.



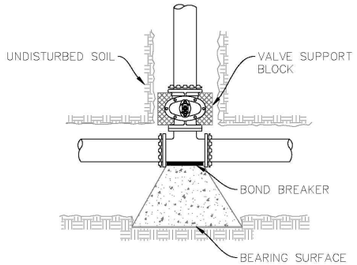
OVER BENDS



BENDS OF 22 1/2° OR GREATER

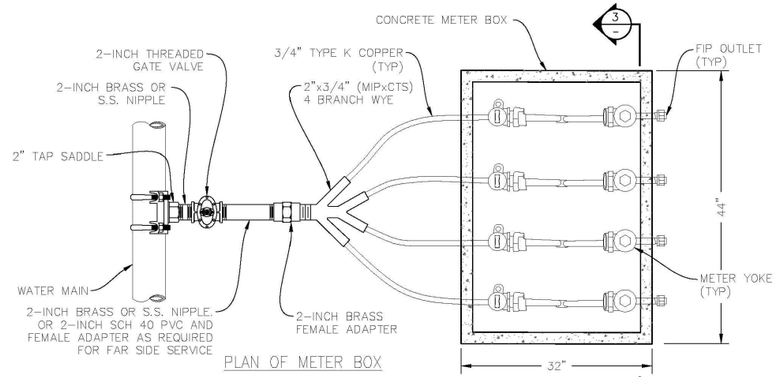


DEAD ENDS

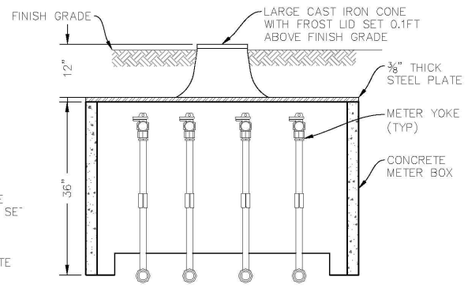


TEES

THRUST BLOCK DETAILS (J)
UTE WATER STANDARD DETAILS
SCALE: NTS



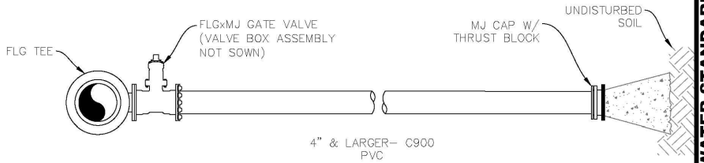
PLAN OF METER BOX



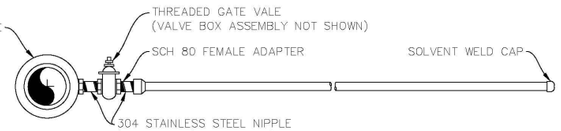
SECTION OF METER BOX

NOTES:
1. CAST IRON CONE, CONCRETE METER BOX, STEEL PLATE, & METER YOKES TO BE PROVIDED BY DISTRICT
2. CAST IRON CONE AND CONCRETE METER BOX ASSEMBLY SHALL BE SET 0.1 FT ABOVE FINISH GRADE

4 METER GANG BOX DETAIL (L)
UTE WATER STANDARD DETAILS
SCALE: NTS



4" & LARGER- C900 PVC

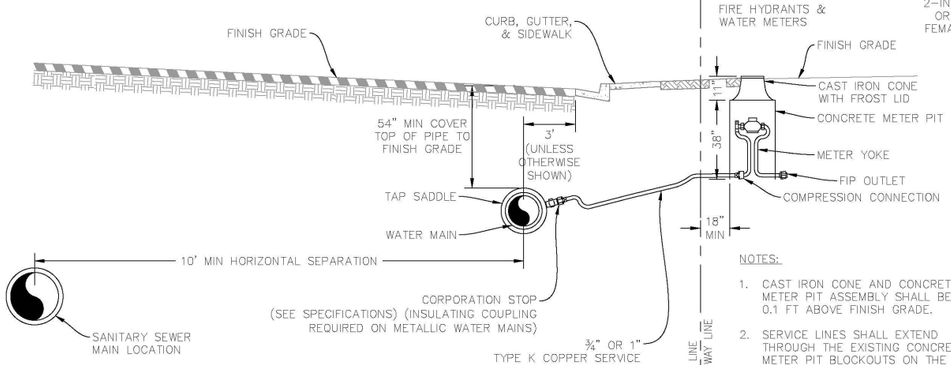


1-1/2" TO 3" SCHEDULE 40 PVC PIPE

NOTES:
1. ALL COMMERCIAL SERVICE LINES SHALL HAVE A 3/4" TAP SADDLE, CORP STOP AND COPPER INSTALLED AT THE END TO ALLOW FOR BLEEDING OF AIR. CONTRACTOR SHALL DIG UP AND TURN OFF CORP STOP AFTER TESTING HAS BEEN COMPLETED AND WATER LINE IS ACCEPTED BY UTE WATER.
2. SERVICE LINE ENDPOINT IS TO EXTEND TO PROPERTY SIDE OF THE RIGHT OF WAY LINE AND MARKED WITH A STEEL POST.

1-1/2 & LARGER SERVICE DETAILS (M)
UTE WATER STANDARD DETAILS
SCALE: NTS

RESERVED FOR:
FIRE HYDRANTS & WATER METERS



NOTES:
1. CAST IRON CONE AND CONCRETE METER PIT ASSEMBLY SHALL BE SET 0.1 FT ABOVE FINISH GRADE.
2. SERVICE LINES SHALL EXTEND THROUGH THE EXISTING CONCRETE METER PIT BLOCKOUTS ON THE BOTTOM RING.
3. METER YOKE SHALL BE CENTERED WITHIN THE CONCRETE METER PIT.

DOMESTIC SERVICE DETAIL (K)
UTE WATER STANDARD DETAILS
SCALE: NTS

DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

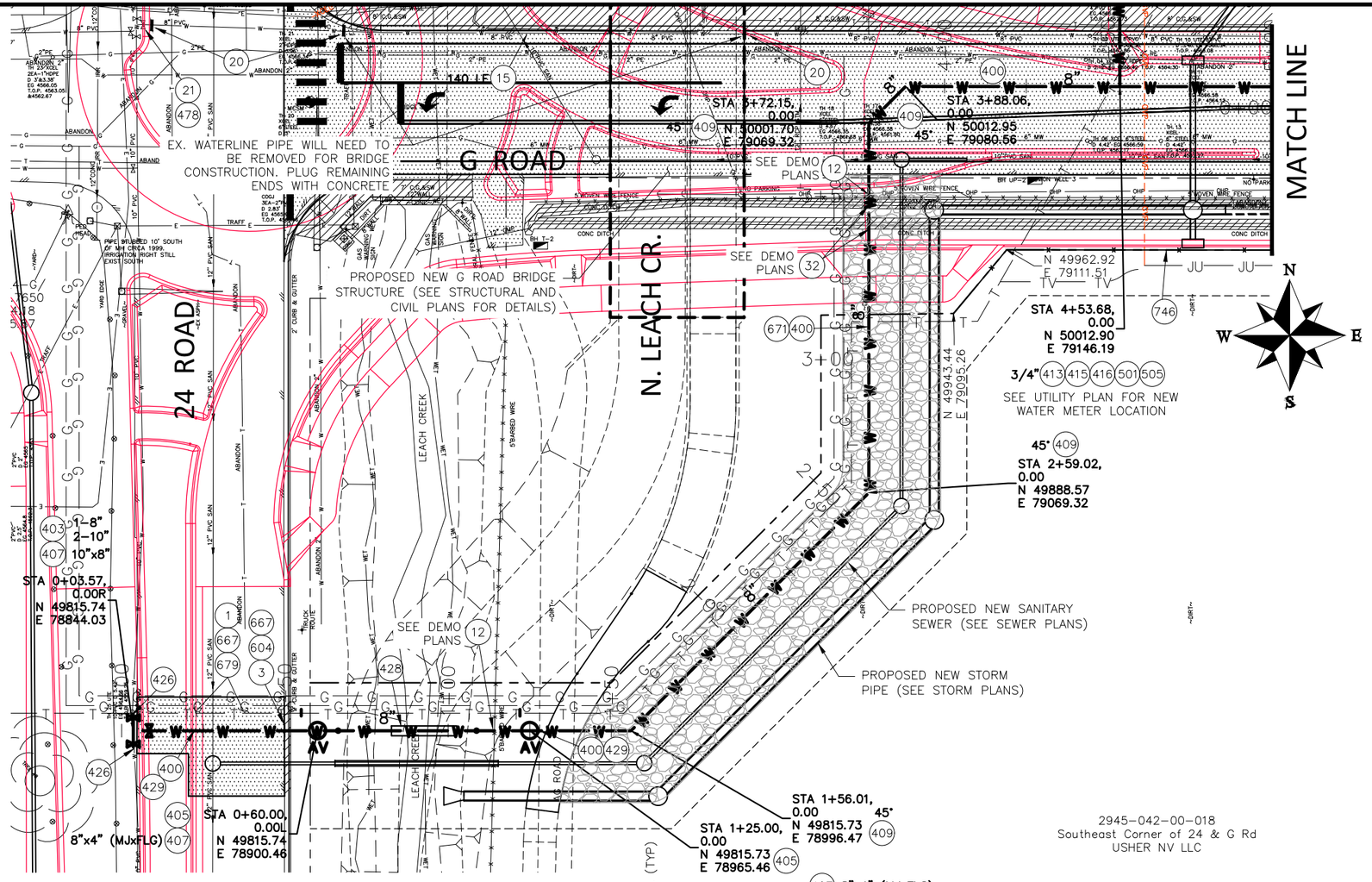
NO SCALE

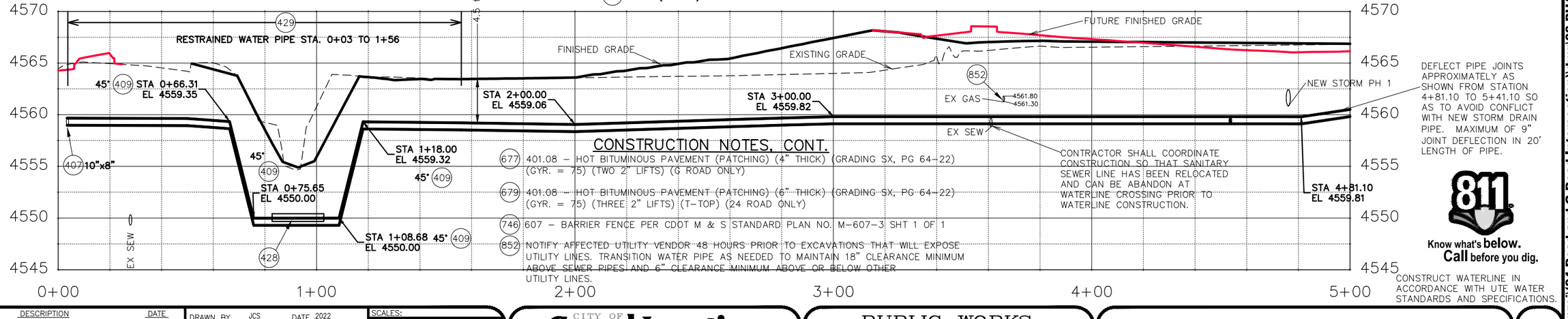
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
UTE WATER STANDARD DETAILS - 2

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\UTE WATER STANDARD DETAILS.dwg, 4/23/2021 6:56:38 AM





CONSTRUCTION NOTES

(1) 202 – REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH)

(3) 202 – REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN)

(12) 202 – REMOVAL OF FENCE AS SHOWN. (HEIGHT AND MATERIAL AS SHOW ON PLAN)

(15) 202 – REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)

(20) 202 – ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.

(21) 202 – REMOVE EXISTING WATER VALVE.

(32) 202 – REMOVE EXISTING CONCRETE DITCH.

(400) 102.7/108.2 – WATER MAIN PIPE (C–900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL AND MJ SOLID SLEEVE COUPLING WITH RESTRAINTS OR ENGINEER APPROVED EQUAL FOR CONNECTION INTO EXISTING PIPES)

(403) 102.8b/108.3 – GATE VALVE (FL x MJ) (SIZE AS SHOWN)

(405) 102.8g/102.8h/108.3 – AIR RELEASE VALVE ASSEMBLY AND VAULT (ASSEMBLY INCLUDES: 4" x 2" COMPANION FLANGE, 2" NIPPLE, 2" BALL VALVE, 2" x 1" BUSHING, AND 1" VAL–MATIC 201C.2 COMBO AIR VALVE PER UTE WATER'S STD. AIR RELEASE VALVE DETAIL)

(407) 102.8/108.3 – TEE (FL) (SIZE AS SHOWN)

(409) 102.8/108.3 – ELBOW (MJ) (SIZE AND ANGLE AS SHOWN)

(413) 102.7c/108.4 – WATER SERVICE LINE (TYPE K COPPER) (SIZE AS SHOWN ON PLAN)

(415) 102.8k/108.4 – TAPPING SADDLE (SIZE AS SHOWN ON PLAN)

(416) 102.8j/108.4 – CORPORATION STOP (SIZE AS SHOWN ON PLAN)

(426) RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE

(428) 102.8 – CAP TOP HALF OF WATERLINE IN CONCRETE PER UTE WATER STANDARD DETAILS. (AT NORTH LEACH CREEK CROSSING)

(429) 102.8 – RESTRAINED PIPE JOINTS PER UTE WATER STANDARD DETAIL. RIEBORLOK SELF–RESTRAINING GASKETS OR ENGINEER APPROVED EQUAL.

(478) 102.8/108.3 – BLIND FLANGE (8") (ATTACH TO EXISTING TEE FITTING) (INCLUDES CONCRETE THRUST–BLOCK)

(501) 102.8l/108.4 – METER SETTER (INSTALL ONLY) (SIZE AS SHOWN) (UTE WATER TO PROVIDE)

(505) 102.8/108.4 – METER PIT (INSTALL ONLY) (UTE WATER TO PROVIDE)

(604) 608.06 – CONCRETE CURB AND GUTTER (2'–6" WIDE) (MATCH IN KIND)

(665) 304 – AGGREGATE BASE COURSE (CLASS 6) (12" THICK) (G ROAD)

(667) 304 – AGGREGATE BASE COURSE (CLASS 6) (18" THICK) (24 ROAD)

(671) 304 – WASHED ROCK SURFACE COURSE FOR GRAVEL DRIVEWAYS. THICKNESS IS 2" MIN. AND 3" MAX.

CONSTRUCTION NOTES, CONT.

(677) 401.08 – HOT BITUMINOUS PAVEMENT (PATCHING) (4" THICK) (GRADING SX, PG 64–22) (GYR. = 75) (TWO 2" LIFTS) (G ROAD ONLY)

(679) 401.08 – HOT BITUMINOUS PAVEMENT (PATCHING) (6" THICK) (GRADING SX, PG 64–22) (GYR. = 75) (THREE 2" LIFTS) (T–TOP) (24 ROAD ONLY)

(746) 607 – BARRIER FENCE PER CDOT M & S STANDARD PLAN NO. M–607–3 SHT 1 OF 1

(852) NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. TRANSITION WATER PIPE AS NEEDED TO MAINTAIN 18" CLEARANCE MINIMUM ABOVE SEWER PIPES AND 6" CLEARANCE MINIMUM ABOVE OR BELOW OTHER UTILITY LINES.

CONTRACTOR SHALL COORDINATE CONSTRUCTION SO THAT SANITARY SEWER LINE HAS BEEN RELOCATED AND CAN BE ABANDON AT WATERLINE CROSSING PRIOR TO WATERLINE CONSTRUCTION.

DEFLECT PIPE JOINTS APPROXIMATELY AS SHOWN FROM STATION 4+81.10 TO 5+41.10 SO AS TO AVOID CONFLICT WITH NEW STORM DRAIN PIPE. MAXIMUM OF 9" JOINT DEFLECTION IN 20' LENGTH OF PIPE.

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

CONSTRUCT WATERLINE IN ACCORDANCE WITH UTE WATER STANDARDS AND SPECIFICATIONS.

DESCRIPTION	DATE
REVISION ⚠ REV 1	DATE
REVISION ⚠ REV 2	DATE
REVISION ⚠ REV 3	DATE
REVISION ⚠ REV 4	DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

SCALES: PLAN & PROFILE HORIZONTAL 0 20 40 VERTICAL 0 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207–F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
WATERLINE PLAN – 1

33

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\WATERLINE PLAN PH 1.dwg, 4/23/2021 6:56:40 AM

2701-333-00-152
728 24 RD
CITY OF GRAND JUNCTION

CP /PK G E/
N 50046.8600
E 79219.98
EL 4566.30

STA 6+16.66,
PRC
N 50016.63
E 79308.94

STA 6+60.22,
PT
N 50020.44
E 79352.28

STA 5+04.86,
26.86L
N 50039.71
E 79197.39

STA 5+04.91,
0.00
N 50012.86
E 79197.41

STA 5+72.92,
PC
N 50012.81
E 79265.42

N 49962.73
E 79370.15

2945-042-00-018
Southeast Corner of 24 & G Rd
USHER NV LLC

CANYON VIEW

G ROAD

MATCH LINE

MATCH LINE

DEFLECT PIPE ALONG A 250' RADIUS AS SHOWN (CURVE AND REVERSE CURVE)

CONSTRUCTION NOTES

1. 202 – REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH)
3. 202 – REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN)
12. 202 – REMOVAL OF FENCE AS SHOWN. (HEIGHT AND MATERIAL AS SHOW ON PLAN)
25. 202 – ABANDON EXISTING WATER VALVE. CLOSE VALVE, REMOVE TOP HALF OF EXISTING VALVE BOX, FILL CAVITY TO FINISH GRADE WITH FLOW FILL MATERIAL.
32. 202 – REMOVE EXISTING CONCRETE DITCH.
400. 102.7/108.2 – WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
403. 102.8b/108.3 – GATE VALVE (FL x MJ) (SIZE AS SHOWN)
407. 102.8/108.3 – TEE (MJ x FL) (SIZE AS SHOWN)
412. 102.8a/108.3 – FIRE HYDRANT ASSEMBLY
665. 304 – AGGREGATE BASE COURSE (CLASS 6) (12" THICK) (G ROAD)
677. 401.08 – HOT BITUMINOUS PAVEMENT (PATCHING) (4" THICK) (GRADING SX, PG 64-22) (GYR. = 75) (TWO 2" LIFTS)
746. 607 – BARRIER FENCE PER CDOT M & S STANDARD PLAN NO. M-607-3 SHT 1 OF 1

NOTE:
CONTRACTOR TO COORDINATE VERTICAL LOCATION OF WATERLINE WITH THE CITY OF GRAND JUNCTION AS DEPTH IS BASED ON FUTURE GRADES.

STA 5+01.10
EL 4560.56

STA 5+21.10
EL 4561.80

STA 5+41.10
EL 4561.78

EXISTING GRADE

FUTURE FINISHED GRADE

4.5 ft. (TYP.)

DEFLECT PIPE JOINTS APPROXIMATELY AS SHOWN FROM STATION 4+81.10 TO 5+41.10 SO AS TO AVOID CONFLICT WITH NEW STORM DRAIN PIPE. MAXIMUM OF 9" JOINT DEFLECTION IN 20' LENGTH OF PIPE.

4590 4585 4580 4575 4570 4565 4560 4555 4550 4545

5+00 6+00 7+00 8+00 9+00 10+00

Know what's below. Call before you dig.

CONSTRUCT WATERLINE IN ACCORDANCE WITH UTE WATER STANDARDS AND SPECIFICATIONS.

DESCRIPTION	DATE
REVISION 1 REV_1	DATE
REVISION 2 REV_2	DATE
REVISION 3 REV_3	DATE
REVISION 4 REV_4	DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

SCALES: PLAN & PROFILE HORIZONTAL 0 20 40 VERTICAL 0 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
WATERLINE PLAN – 2

34

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\WATERLINE PLAN PH 1.dwg, 4/23/2021 6:56:57 AM

2701-333-00-152
728 24 RD
CITY OF GRAND JUNCTION

MATCH LINE

MATCH LINE

G ROAD

8"

N 49973.22
E 80061.62

N 49973.42
E 79797.57

2945-042-00-018
Southeast Corner of 24 & G Rd
USHER NV LLC

CONSTRUCTION NOTES

1. 202 – REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH)
12. 202 – REMOVAL OF FENCE AS SHOWN. (HEIGHT AND MATERIAL AS SHOW ON PLAN)
32. 202 – REMOVE EXISTING CONCRETE DITCH.
400. 102.7/108.2 – WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
428. 102.8 – CAP TOP HALF OF EXISTING SEWER LINE IN CONCRETE PER UTE WATER STANDARD DETAILS.
665. 304 – AGGREGATE BASE COURSE (CLASS 6) (12" THICK) (G ROAD)
677. 401.08 – HOT BITUMINOUS PAVEMENT (4" THICK) (GRADING SX, PG 64-22) (GYR = 75)(TWO 2" LIFTS)
746. 607 – BARRIER FENCE PER CDOT M & S STANDARD PLAN NO. M-607-3 SHT 1 OF 1
853. THE CONTRACTOR SHALL VERIFY FUTURE CONSTRUCTION DESIGN ELEVATIONS AT CROSSING WITH PROJECT ENGINEER 5 WORKING DAYS IN ADVANCE OF INSTALLATION OF PIPE LINE IN THIS AREA.

4590 4585 4580 4575 4570 4565 4560 4555 4550 4545

EXISTING GRADE
FUTURE FINISHED GRADE
4.5 ft. (TYP)
NEW STORM
EX STM
EX SEW
IRRIGATION WINTER 2021

STA 13+98.00
EL 4564.26

STA 14+18.00
EL 4563.68

STA 14+38.00
EL 4562.93

STA 14+58.00
EL 4562.93

STA 14+78.00
EL 4563.68

STA 14+98.00
EL 4564.96

NOTE:
CONTRACTOR TO COORDINATE VERTICAL LOCATION OF WATERLINE WITH THE CITY OF GRAND JUNCTION AS DEPTH IS BASED ON FUTURE GRADES.

DEFLECT PIPE JOINTS APPROXIMATELY AS SHOWN FROM STATION 13+98 TO 14+98 SO AS TO BE BELOW IRRIGATION PIPE AND ABOVE SEWER PIPE. MAXIMUM OF 9" JOINT DEFLECTION IN 20' LENGTH OF PIPE.

10+00 11+00 12+00 13+00 14+00 15+00

Know what's below. Call before you dig.

CONSTRUCT WATERLINE IN ACCORDANCE WITH UTE WATER STANDARDS AND SPECIFICATIONS.

DESCRIPTION	DATE
REVISION 1 REV_1	DATE
REVISION 2 REV_2	DATE
REVISION 3 REV_3	DATE
REVISION 4 REV_4	DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

SCALES:
PLAN & PROFILE
HORIZONTAL 0 20 40
VERTICAL 0 5 10

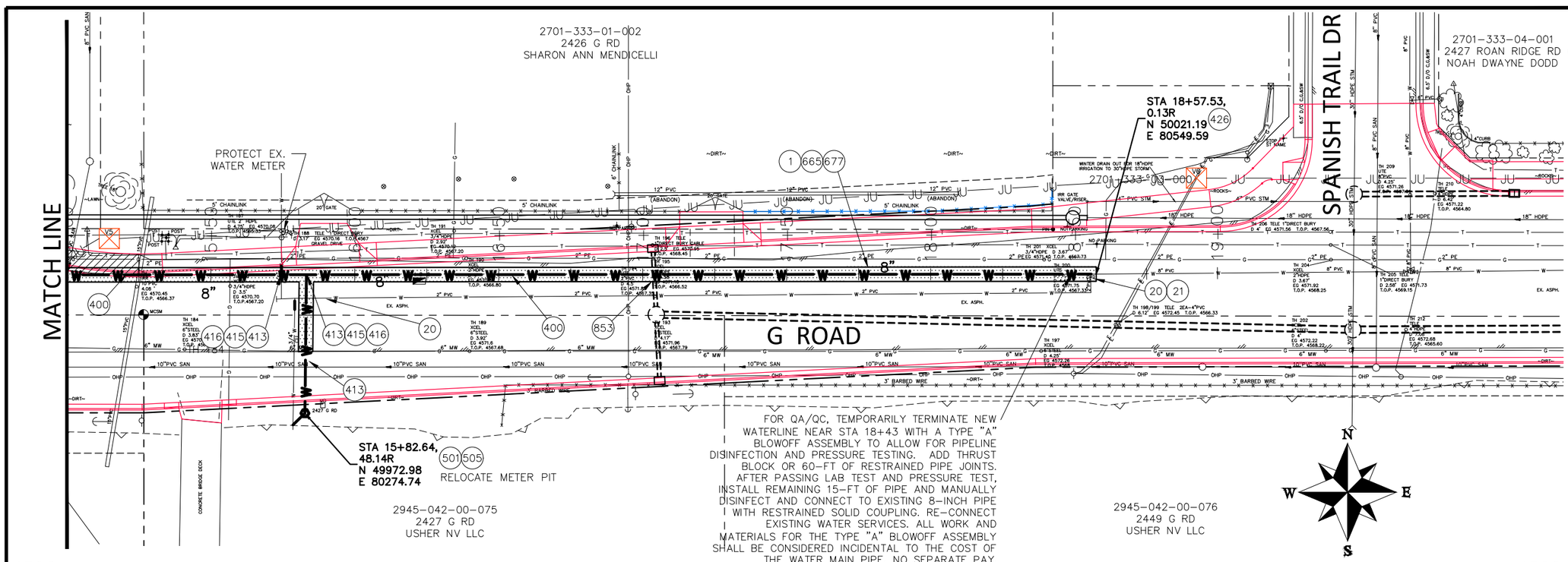
CITY OF Grand Junction COLORADO

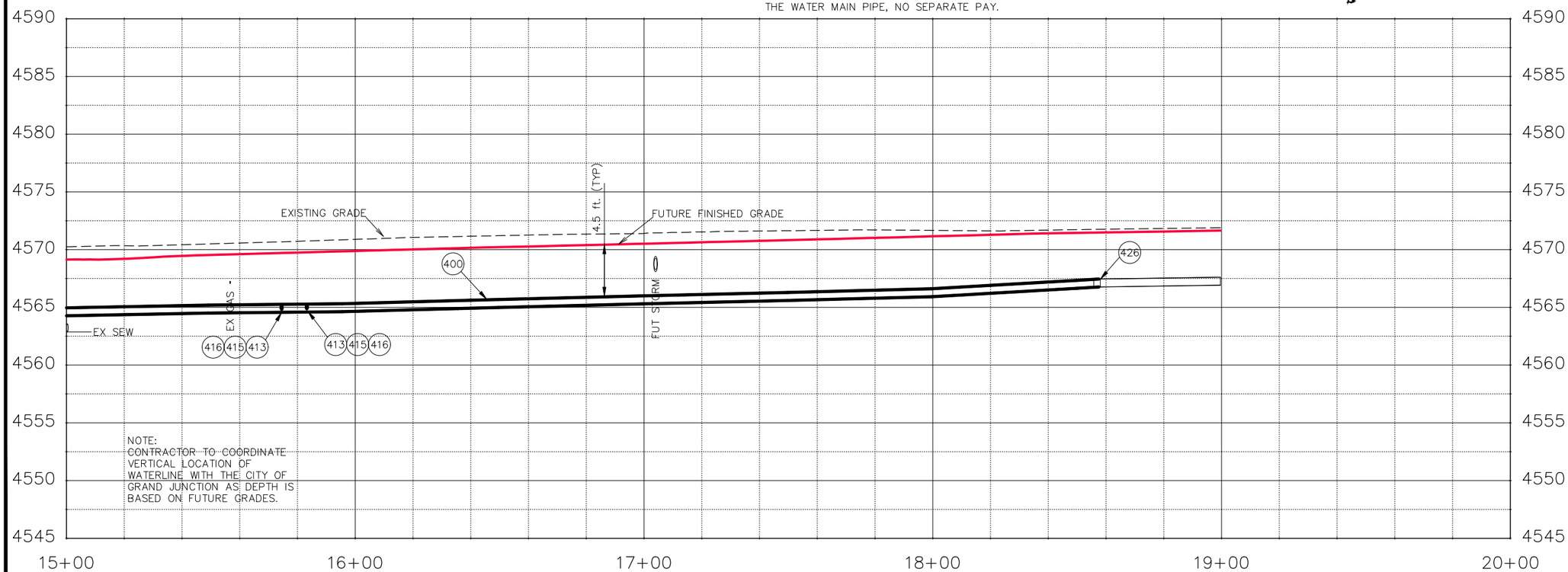
PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
WATERLINE PLAN – 3

35

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\WATERLINE PLAN PH 1.dwg, 4/23/2021 6:57:14 AM





CONSTRUCTION NOTES

1. 202 – REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH)
3. 202 – REMOVAL OF CONCRETE CURB, GUTTER AND SIDEWALK. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) (NO REPLACEMENT NECESSARY)
20. 202 – ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.
21. 202 – REMOVE EXISTING WATER VALVE.
400. 102.7/108.2 – WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL AND MJ SOLID SLEEVE COUPLING WITH RESTRAINTS OR ENGINEER APPROVED EQUAL FOR CONNECTION INTO EXISTING PIPES)
413. 102.7c/108.4 – WATER SERVICE LINE (TYPE K COPPER) (SIZE AS SHOWN ON PLAN)
415. 102.8k/108.4 – TAPPING SADDLE (SIZE AS SHOWN ON PLAN)
416. 102.8j/108.4 – CORPORATION STOP (SIZE AS SHOWN ON PLAN)
426. RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE.
501. 102.8l/108.4 – METER SETTER (INSTALL ONLY) (SIZE AS SHOWN) (UTE WATER TO PROVIDE)
505. 102.8/108.4 – METER PIT (INSTALL ONLY) (UTE WATER TO PROVIDE)
665. 304 – AGGREGATE BASE COURSE (CLASS 6) (12" THICK) (G ROAD)
677. 401.08 – HOT BITUMINOUS PAVEMENT (PATCHING) (4" THICK) (GRADING SX, PG 64-22) (GYR. = 75) (TWO 2" LIFTS)
853. THE CONTRACTOR SHALL VERIFY FUTURE CONSTRUCTION DESIGN ELEVATIONS AT CROSSING WITH PROJECT ENGINEER 5 WORKING DAYS IN ADVANCE OF INSTALLATION OF PIPE LINE IN THIS AREA.

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

CONSTRUCT WATERLINE IN ACCORDANCE WITH UTE WATER STANDARDS AND SPECIFICATIONS.

DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

SCALES: PLAN & PROFILE HORIZONTAL 0 20 40 VERTICAL 0 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
WATERLINE PLAN – 4

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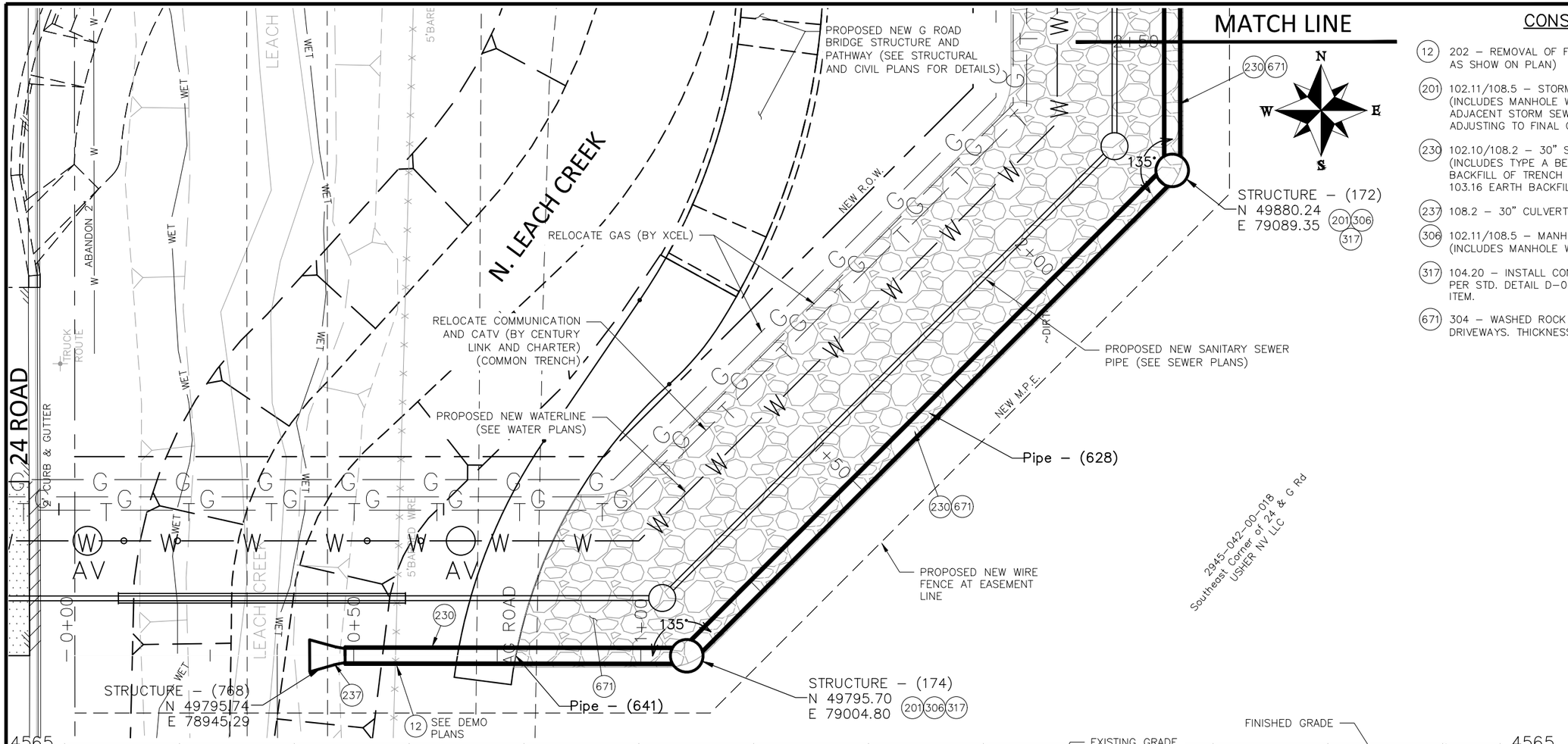


CONSTRUCTION NOTES

(12) 202 – REMOVAL OF FENCE AS SHOWN. (HEIGHT AND MATERIAL AS SHOW ON PLAN)

(201) 102.11/108.5 – STORM SEWER BASIC MANHOLE (60" I.D.) (INCLUDES MANHOLE WATERPROOFING AND CONNECTION OF ADJACENT STORM SEWER PIPES, FORMING INVERTS, AND ADJUSTING TO FINAL GRADE. SEE CITY STD. DETAIL D–03)

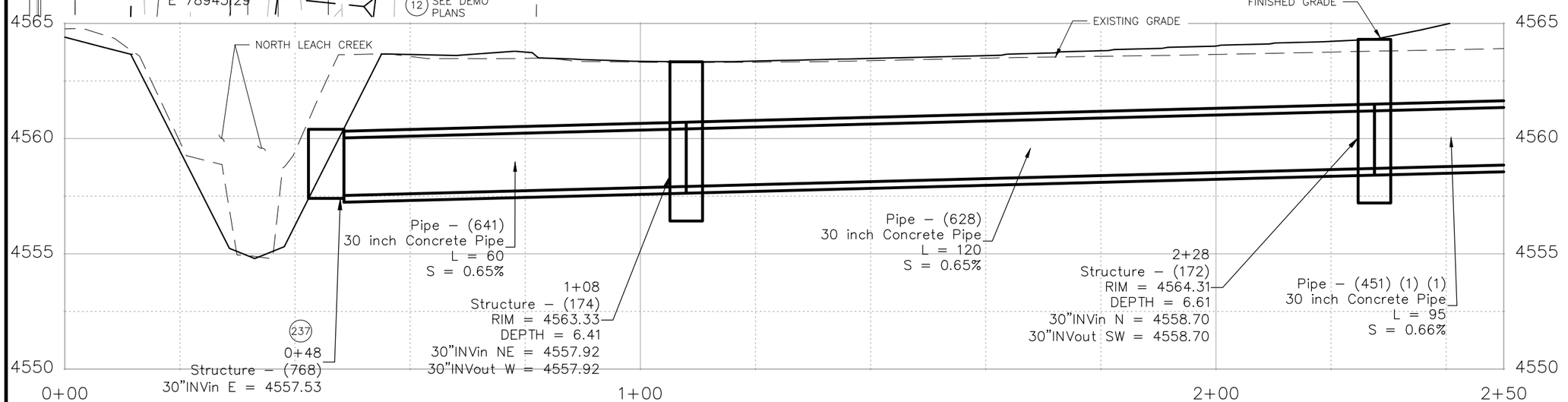
(230) 102.10/108.2 – 30" STORM DRAIN PIPE (RCP, CLASS II) (INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL)

(237) 108.2 – 30" CULVERT END SECTION (RCP)

(306) 102.11/108.5 – MANHOLE BARREL SECTION (D>5') (60" I.D.) (INCLUDES MANHOLE WATERPROOFING)

(317) 104.20 – INSTALL CONCRETE COLLAR W/ #4 REBAR HOOP AS PER STD. DETAIL D–04. INCIDENTAL TO STORM MANHOLE PAY ITEM.

(671) 304 – WASHED ROCK SURFACE COURSE FOR GRAVEL DRIVEWAYS. THICKNESS IS 2" MIN. 3" MAX.



Know what's below. Call before you dig.

DESCRIPTION	DATE
REVISION ⚠ REV 1	– DATE
REVISION ⚠ REV 2	– DATE
REVISION ⚠ REV 3	– DATE
REVISION ⚠ REV 4	– DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 VERTICAL 0 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207–F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
STORM DRAIN PLAN AND PROFILE PH 1 – 1

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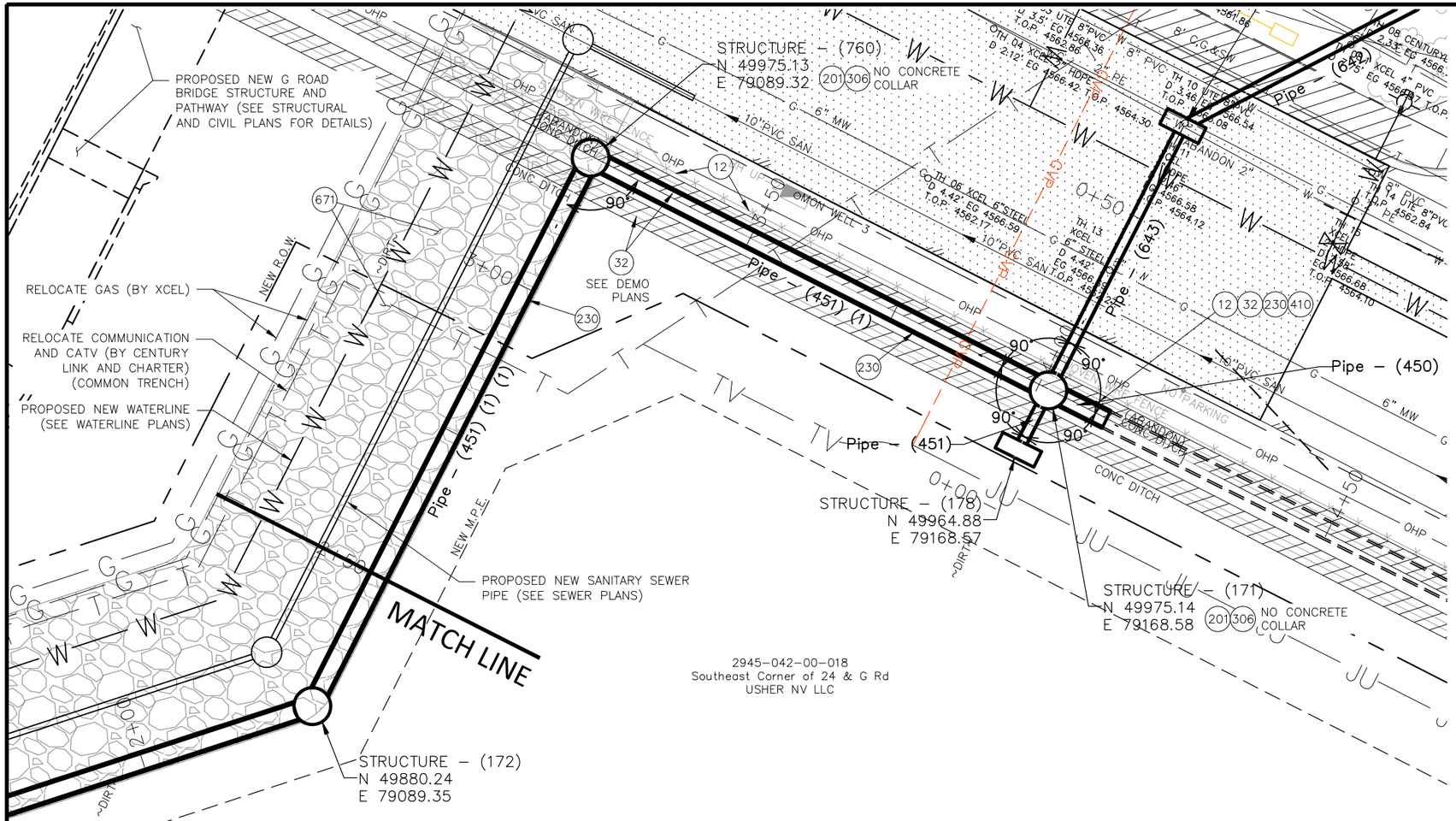


CONSTRUCTION NOTES

(12) 202 – REMOVAL OF FENCE AS SHOWN. (HEIGHT AND MATERIAL AS SHOW ON PLAN)

(32) 202 – REMOVE EXISTING CONCRETE IRRIGATION DITCH.

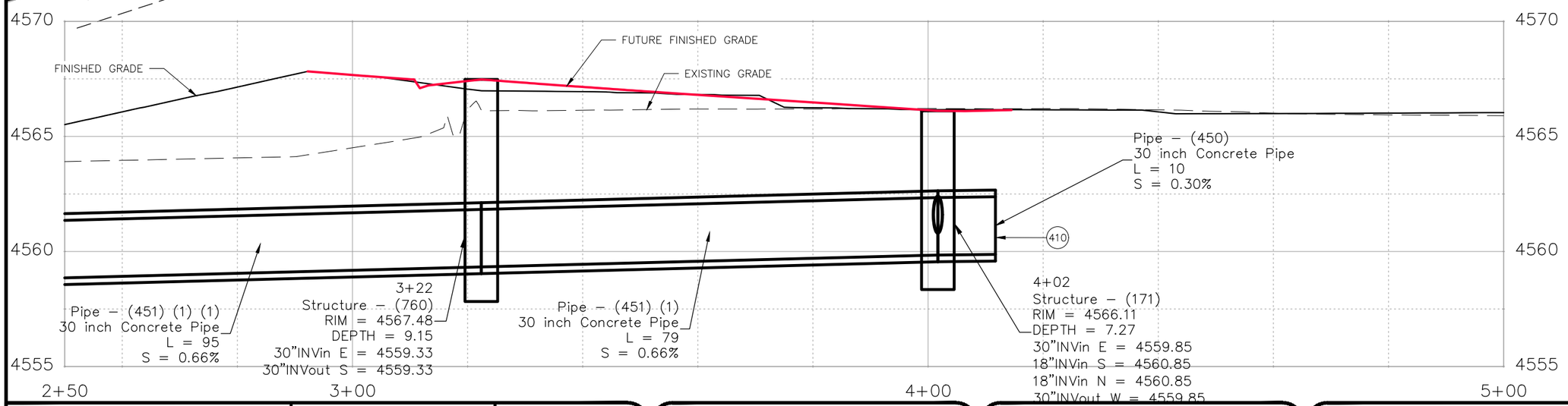
(201) 102.11/108.5 – STORM SEWER BASIC MANHOLE (60" I.D.) (INCLUDES MANHOLE WATERPROOFING AND CONNECTION OF ADJACENT STORM SEWER PIPES, FORMING INVERTS, AND ADJUSTING TO FINAL GRADE. SEE CITY STD. DETAIL D–03)

(230) 102.10/108.2 – 30" STORM DRAIN PIPE (RCP, CLASS II) (INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL)

(306) 102.11/108.5 – MANHOLE BARREL SECTION (D>5') (60" I.D.) (INCLUDES MANHOLE WATERPROOFING)

(410) 102.8/108.3 – END CAP/PLUG (SIZE AS SHOWN)

(671) 304 – WASHED ROCK SURFACE COURSE FOR GRAVEL DRIVEWAYS. THICKNESS IS 2" MIN. 3" MAX.



DESCRIPTION	DATE
REVISION ⚠ REV 1	– DATE
REVISION ⚠ REV 2	– DATE
REVISION ⚠ REV 3	– DATE
REVISION ⚠ REV 4	– DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20
VERTICAL 0 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207–F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
STORM DRAIN PLAN AND PROFILE PH 1 – 2

Know what's below. Call before you dig.

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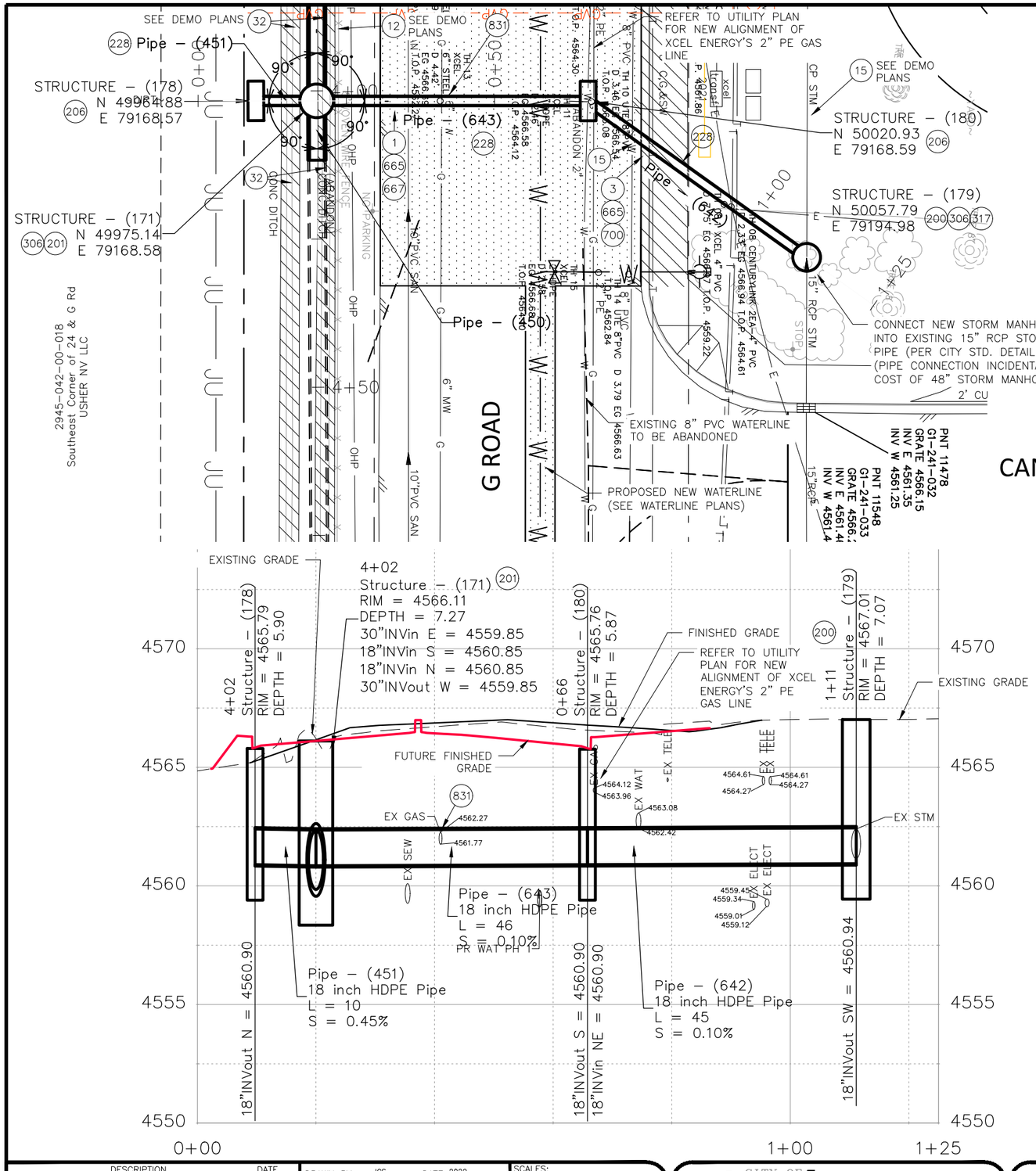

CONSTRUCTION NOTES

1. 202 – REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
3. 202 – REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN)
12. 202 – REMOVAL OF FENCE AS SHOWN. (HEIGHT AND MATERIAL AS SHOW ON PLAN)
15. 202 – REMOVAL OF PIPE AS SHOWN (SIZE AND TYPE AS SHOWN ON PLAN)
32. 202 – REMOVE EXISTING CONCRETE IRRIGATION DITCH.
200. 102.11/108.5 – STORM SEWER BASIC MANHOLE (48" I.D.) (INCLUDES MANHOLE WATERPROOFING AND CONNECTION OF ADJACENT STORM SEWER PIPES, FORMING INVERTS, AND ADJUSTING TO FINAL GRADE. SEE CITY STD. DETAIL D-03)
201. 102.11/108.5 – STORM SEWER BASIC MANHOLE (60" I.D.) (INCLUDES MANHOLE WATERPROOFING AND CONNECTION OF ADJACENT STORM SEWER PIPES, FORMING INVERTS, AND ADJUSTING TO FINAL GRADE. SEE CITY STD. DETAIL D-03)
206. 102.13/108.6 – DOUBLE STORM DRAIN INLET (CONC. BOX ONLY) (NO FRAME AND GRATE ASSEMBLY) (INCLUDES STEEL PLATE WITH DIMENSIONS EQUAL TO OR GREATER THAN 78" LONG x 30" WIDE x 8" THICK) (SEE CITY STD. DETAIL D-08 FOR BOX DETAILS)
228. 102.10/108.2 – 18" STORM DRAIN PIPE (HDPE) (CORRUGATED HDPE ADS N-12 DUAL WALL, WATER TIGHT (WTIB) PIPE OR ENGINEER APPROVED EQUAL) (20-FT PIPE LENGTHS) (INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL)
306. 102.11/108.5 – MANHOLE BARREL SECTION (D>5') (48" & 60" I.D.) (INCLUDES MANHOLE WATERPROOFING)
317. 104.20 – INSTALL CONCRETE COLLAR W/ #4 REBAR HOOP AS PER STD. DETAIL D-04. INCIDENTAL TO MANHOLE PAY ITEM.
665. 304 – AGGREGATE BASE COURSE (CLASS 6) (12" THICK) (G ROAD)
677. 401.08 – HOT BITUMINOUS PAVEMENT (PATCHING) (4" THICK) (GRADING SX, PG 64-22) (GYR. = 75) (TWO 2" LIFTS) (G ROAD ONLY)
700. 608.06 – MONOLITHIC VERTICAL CURB, GUTTER, AND SIDEWALK (7' WIDE) (MATCH IN KIND)
831. RESET GAS LINE (BY XCEL, 6" IP GAS LINE)

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

DESCRIPTION	DATE
REVISION 1 REV_1	DATE
REVISION 2 REV_2	DATE
REVISION 3 REV_3	DATE
REVISION 4 REV_4	DATE

DRAWN BY	JCS	DATE	2022
DESIGNED BY	JCS	DATE	2022
CHECKED BY	ALC	DATE	2022
APPROVED BY	TCP	DATE	2022

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 VERTICAL 0 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
STORM DRAIN PLAN AND PROFILE PH 1 – 3

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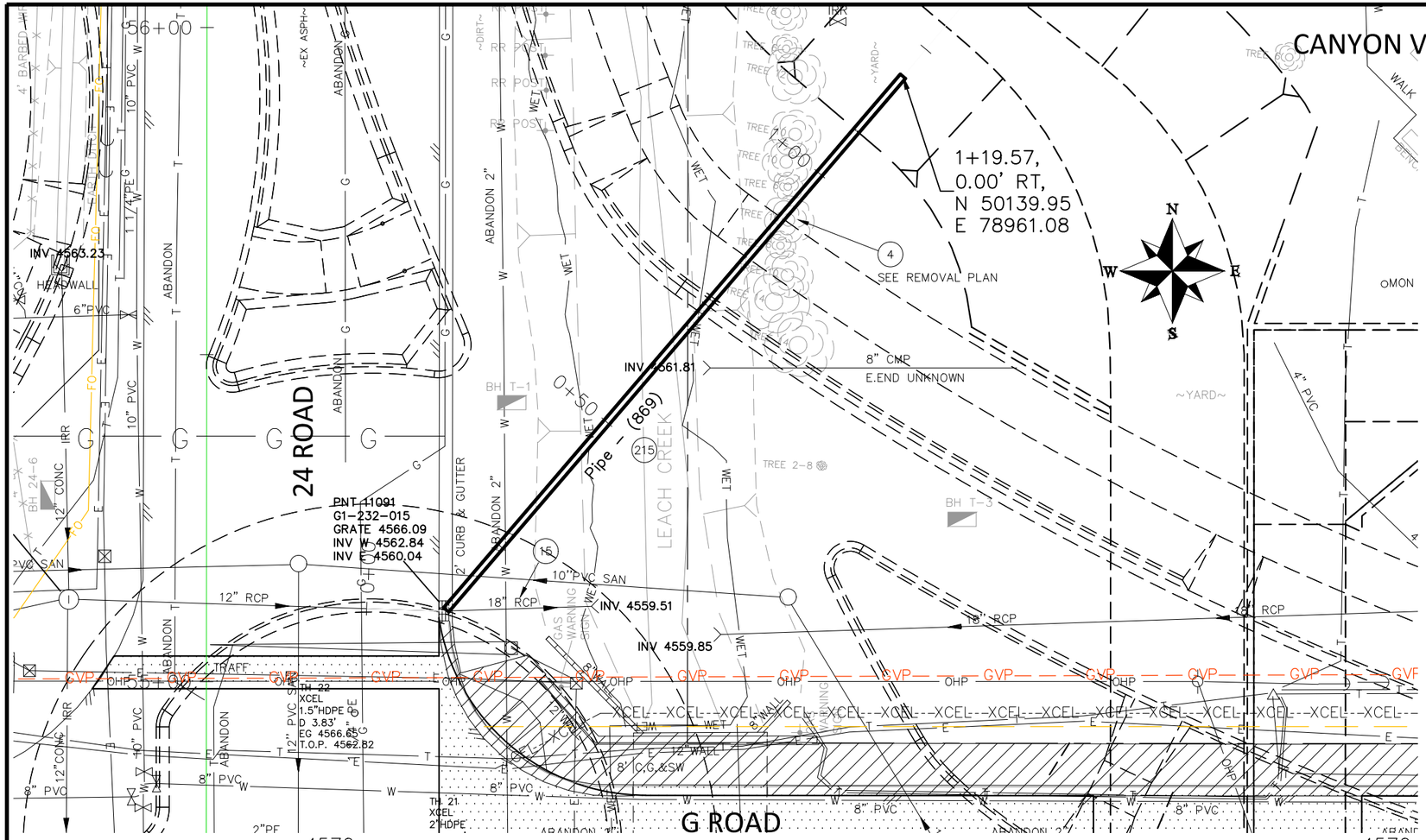

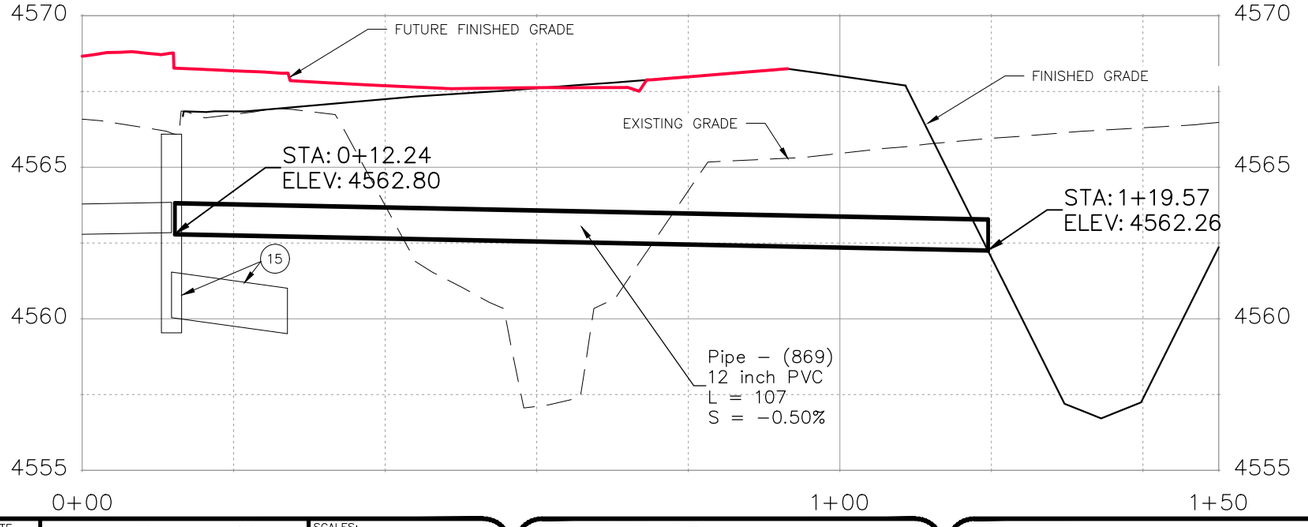

CONSTRUCTION NOTES

(4) 202 – REMOVAL OF TREE (SIZE AS SHOWN ON PLAN)

(15) 202 – REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN) CONTRACTOR SHALL GROUT HOLE OVER LEFT AT INLET AS A RESULT OF REMOVING PIPE. NO SEPARATE PAY

(215) 102.10/108.2 – 12" STORM DRAIN PIPE (SDR 35 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL. CORING AND CONNECTING TO EXISTING INLET SHALL BE INCLUDED IN THE COST OF THE PIPE. NO SEPARATE PAY.

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

DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

DRAWN BY	JCS	DATE	2022
DESIGNED BY	JCS	DATE	2022
CHECKED BY	ALC	DATE	2022
APPROVED BY	TCP	DATE	2022

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20
VERTICAL 0 2.5 5

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
STORM DRAIN PLAN AND PROFILE PH 1 – 4

40

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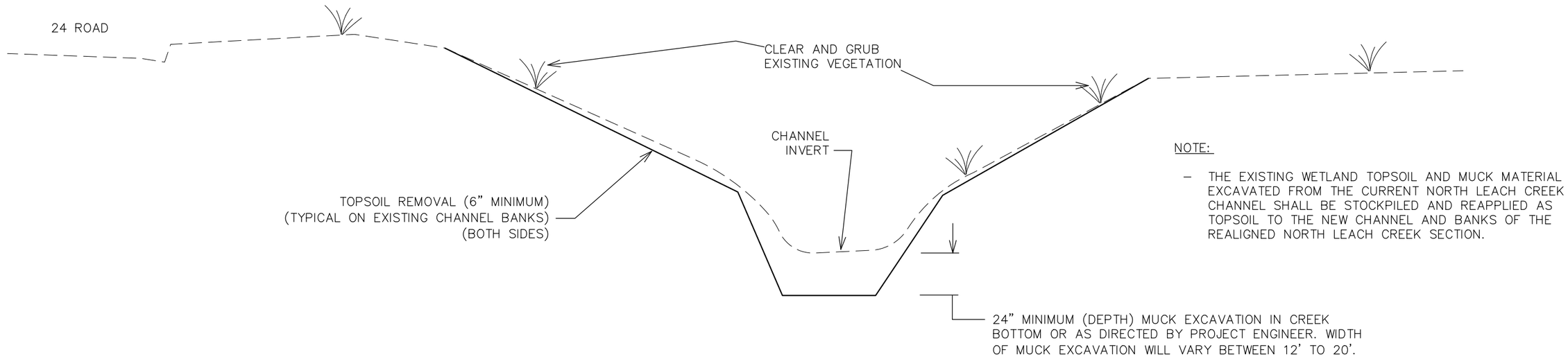
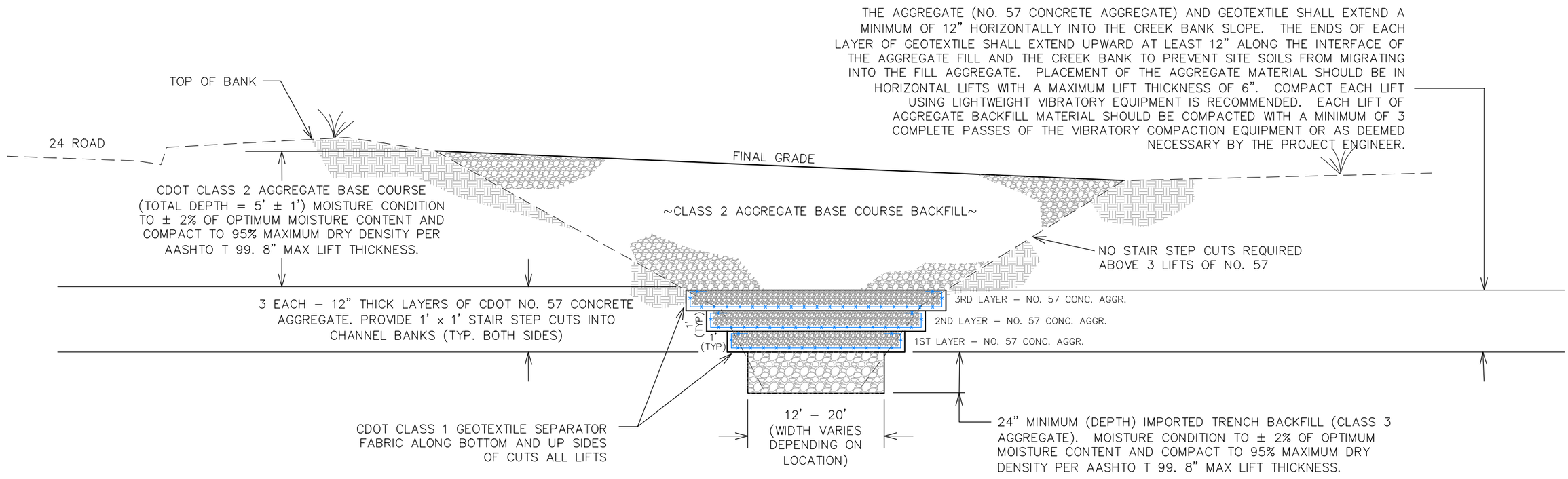


NORTH LEACH CREEK BACKFILL
STEP 1 – CLEARING AND GRUBBING



NORTH LEACH CREEK BACKFILL
STEP 2 – BACKFILL EXISTING NORTH LEACH CREEK CHANNEL

DESCRIPTION	DATE
REVISION 1 REV 1	– DATE
REVISION 2 REV 2	– DATE
REVISION 3 REV 3	– DATE
REVISION 4 REV 4	– DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

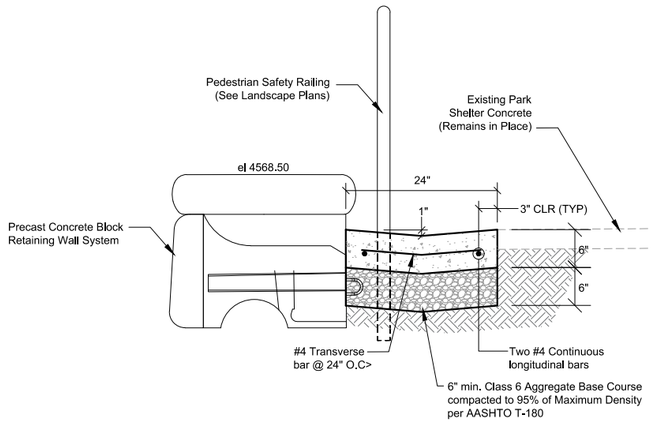
SCALE
NOT TO SCALE

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

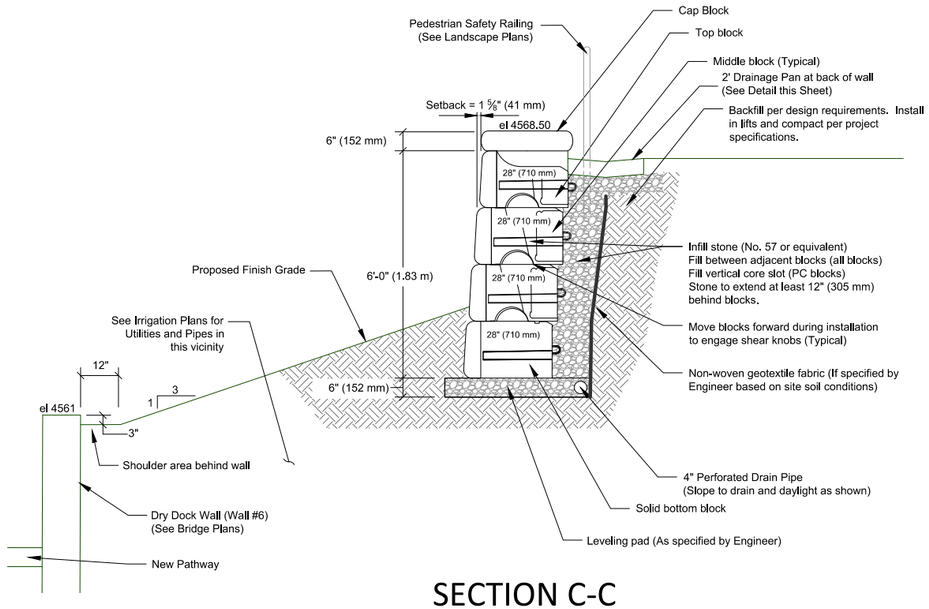
G ROAD BRIDGE REPLACEMENT PROJECT
NORTH LEACH CREEK BACKFILL DETAIL – 1
April 23, 2021

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\NORTH LEACH CREEK BACKFILL DETAIL.dwg, 4/23/2021 7:01:14 AM

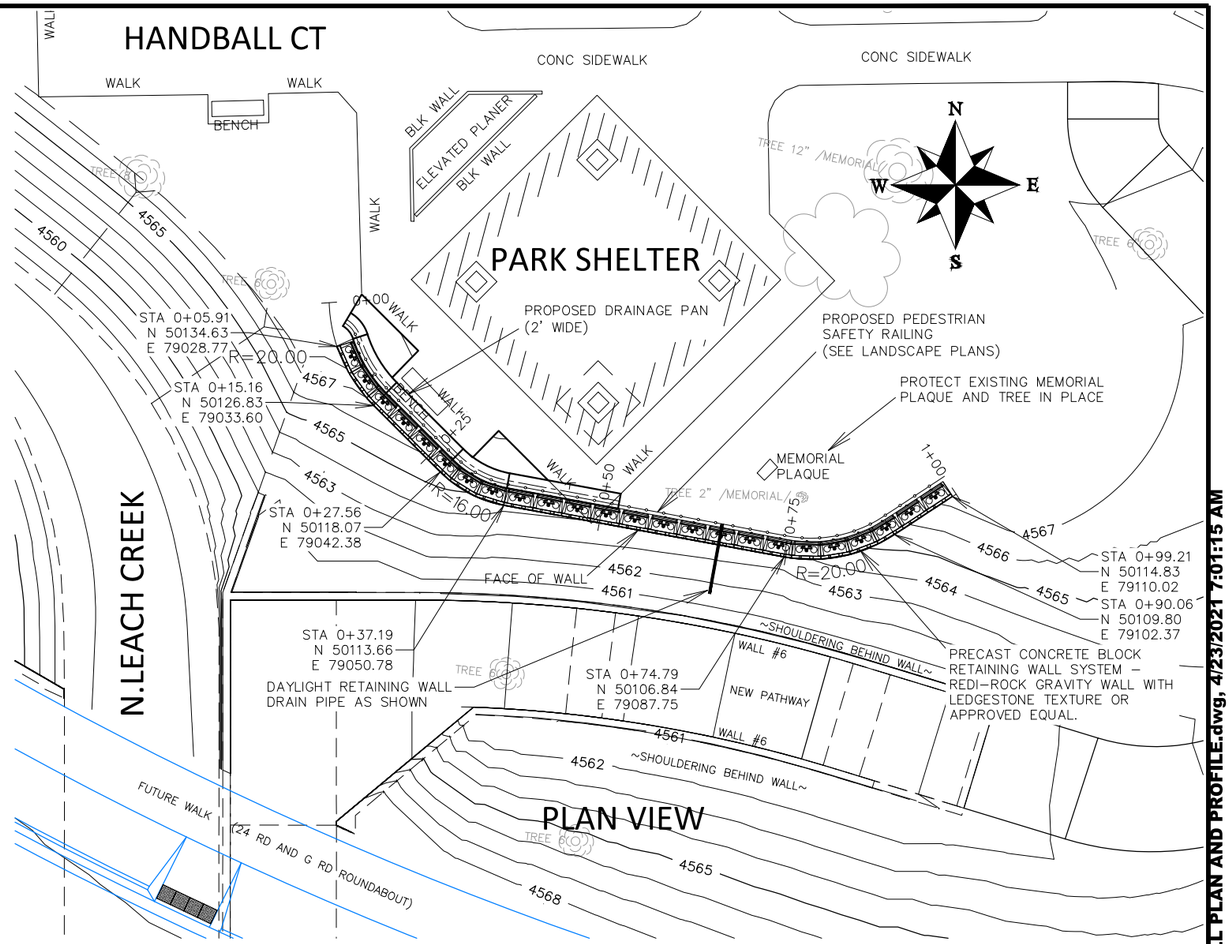


Note:
1. All construction and contraction joints in pan shall be sealed with an approved concrete sealant.
2. Place tranverse joints every 6 feet on center.
3. CDOT Class D Concrete (4500 psi @ 28 days)

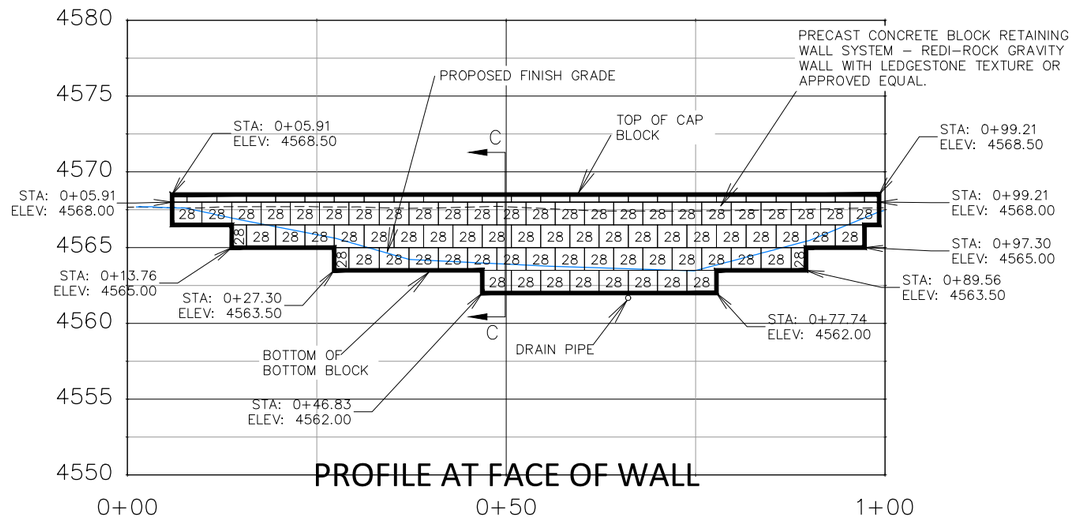
2' DRAINAGE PAN



SECTION C-C



PLAN VIEW



PROFILE AT FACE OF WALL

DESCRIPTION	DATE
REVISION 1 REV 1	– DATE
REVISION 2 REV 2	– DATE
REVISION 3 REV 3	– DATE
REVISION 4 REV 4	– DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
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APPROVED BY TCP DATE 2022

SCALES:
PLAN & PROFILE
HORIZONTAL 0 5 10 20
VERTICAL 0 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207–F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
WALL PLAN AND PROFILE – 1

N:\Landpro\(24 Road and G Road Intersection)\dwg\00 PHASE 1\WALL PLAN AND PROFILE.dwg, 4/23/2021 7:01:15 AM

PREFORMED THERMOPLASTIC PAVEMENT MARKING (XWALK) (TYPICAL)

37+71.05, −24.14' LT. N 50032.22 E 78902.85

EPOXY PAVEMENT MARKING (8" WHITE SOLID)

EPOXY PAVEMENT MARKING (4" WHITE SOLID)

PREFORMED THERMOPLASTIC PAVEMENT MARKING (LEFT TURN ARROW) (TYPICAL)

37+75.68, −18.00' LT. N 50026.07 E 78907.47

37+94.14, −6.00' LT. N 50014.06 E 78925.93

38+92.42, −6.00' LT. N 50013.99 E 79024.20

40+68.00, −18.00' LT. N 50025.86 E 79199.79

37+75.68, −6.00' LT. N 50014.07 E 78907.46

37+94.14, 6.00' RT. N 50002.06 E 78925.92

37+94.14, 18.00' RT. N 49990.06 E 78925.91

37+71.70, 23.86' RT. N 49984.22 E 78903.47

668 677

EPOXY PAVEMENT MARKING (4" DOUBLE YELLOW SOLID)

39+22.74, 6.00' RT. N 50001.96 E 79054.51

40+48.06, 1.50' RT. N 50006.37 E 79179.84

40+68.00, 1.50' RT. N 50006.36 E 79199.78

EPOXY PAVEMENT MARKING (4" WHITE SOLID)

40+68.00, 18.00' RT. N 49989.86 E 79199.77

PREFORMED THERMOPLASTIC PAVEMENT MARKING (STOP LINE) (TYPICAL)

24 ROAD

G ROAD

LEACH CREEK

2945−042−00−018
Southeast Corner of 24 & G Rd
USHER NV LLC

CONSTRUCTION NOTES

668 304 − AGGREGATE BASE COURSE (CLASS 6) (12" THICK)

677 401.08 − HOT BITUMINOUS PAVEMENT (4" THICK) (GRADING SX, BINDER GRADE PG 64−22) (TWO 2" LIFTS)

GRADE OF 5" CAST−IN−PLACE CONCRETE TOPPING SLAB FOR G RD BRIDGE

STA 37+58.00
ELEV 4566.33

STA 38+58.37
ELEV 4566.82

STA 38+99.37
ELEV 4567.23

STA 40+68.00
ELEV 4566.95

FUTURE FINISHED GRADE

FINISHED GRADE

EXISTING GRADE

0.49%

1.00%

−0.17%

4580
4575
4570
4565

38+00 38+50 39+00 39+50 40+00 40+50 40+

DESCRIPTION	DATE
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REVISION 4 REV_4	– DATE

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SCALES: PLAN & PROFILE
HORIZONTAL 0 10 20
VERTICAL 0 2.5 5

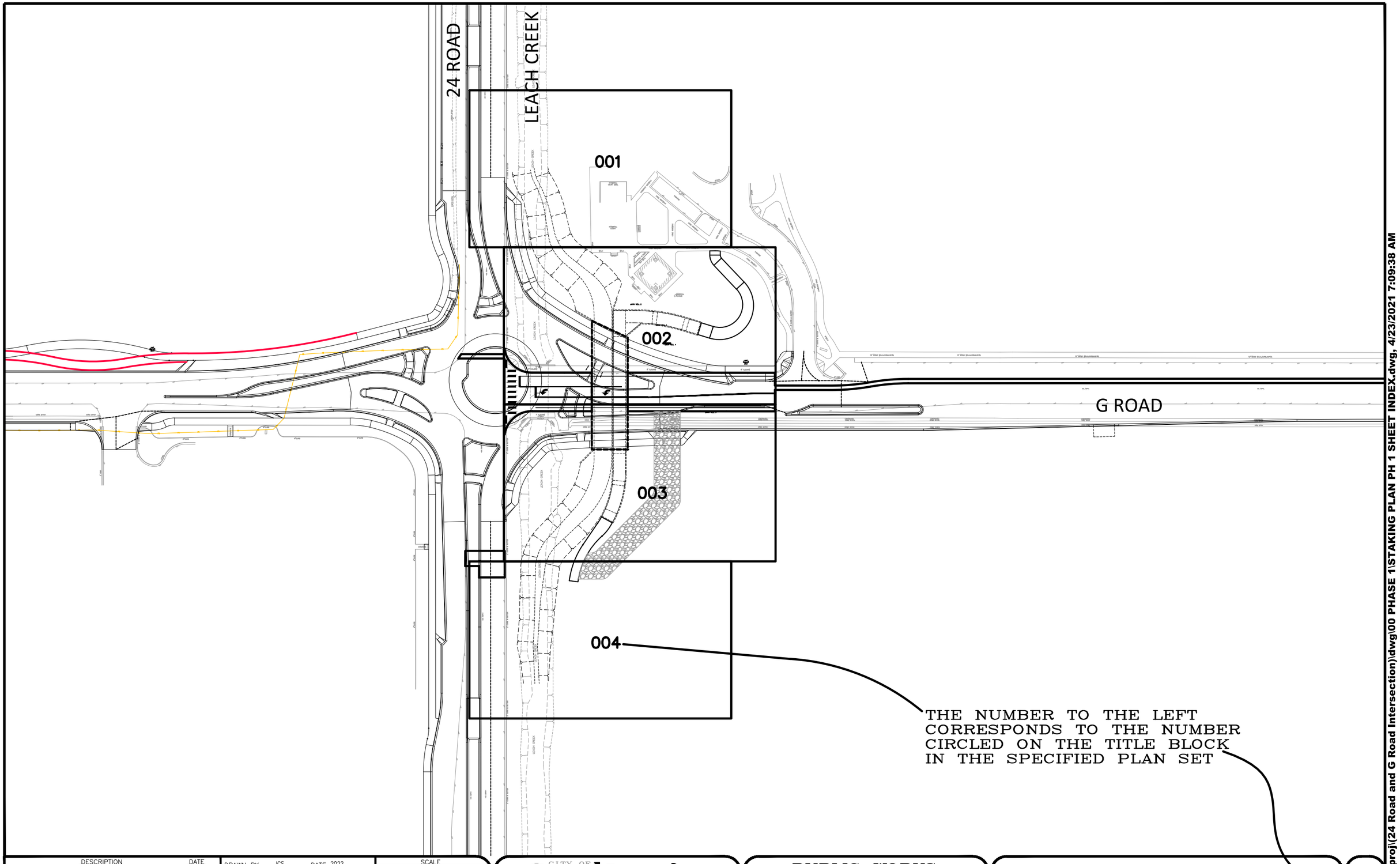
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207−F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
ROAD PLAN AND PROFILE

43

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\ROAD PLAN AND PROFILE.dwg, 4/23/2021 7:02:36 AM



THE NUMBER TO THE LEFT CORRESPONDS TO THE NUMBER CIRCLED ON THE TITLE BLOCK IN THE SPECIFIED PLAN SET

DESCRIPTION	DATE
REVISION ⚠ REV 1	– DATE
REVISION ⚠ REV 2	– DATE
REVISION ⚠ REV 3	– DATE
REVISION ⚠ REV 4	– DATE

DRAWN BY JCS DATE 2022
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SCALE

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
STAKING PLAN SHEET INDEX – 001

44

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\STAKING PLAN PH 1 SHEET INDEX.dwg, 4/23/2021 7:09:38 AM

MATCH LINE

N
W E
S

~EX ASPH~

2' CURB & GUTTER

24 ROAD

N 50259.44
E 78898.76
EL 68.05

N 50222.63
E 78911.27
EL 67.84

N 50222.56
E 78901.27
EL 67.67

N 50180.90
E 78915.40
EL 68.03

N 50179.80
E 78905.43
EL 67.83

239.00'

INSTALL TEMPORARY CONSTRUCTION FENCING AS SHOWN.

HANDBALL COURT WALL

HANDBALL COURT

WALK

CONCRETE SIDEWALK

CONC SIDEWALK

3' VP AN

PARKING

2' C&G

BENCH

CONC SIDEWALK

CONC SIDEWALK

CONC SIDEWALK

1.5' C&G

MATCH LINE

MATCH LINE

DESCRIPTION	DATE
REVISION 1 REV 1	– DATE
REVISION 2 REV 2	– DATE
REVISION 3 REV 3	– DATE
REVISION 4 REV 4	– DATE

DRAWN BY	JCS	DATE	2022
DESIGNED BY	JCS	DATE	2022
CHECKED BY	ALC	DATE	2022
APPROVED BY	TCP	DATE	2022

SCALE

0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
STAKING PLAN – 001

45

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\STAKING PLAN PH 1.dwg, 4/23/2021 8:04:46 AM

MATCH LINE

N.LEACH CREEK

INSTALL TEMPORARY CONSTRUCTION FENCING AS SHOWN.

CONCRETE WALK (4" THICK) OVER 6" CLASS 6 AGGREGATE BASE COURSE.

CONCRETE BIKE PATH (6" THICK) OVER 8" CLASS 6 AGGREGATE BASE COURSE.

INSTALL TEMPORARY CONSTRUCTION FENCING AT BACK OF WALK ALL THE WAY SOUTH TO G RD

NOTE: CONSTRUCT WALL FROM WALL PLAN AND PROFILE

MEMORIAL PLAQUE

SIMON WELL 1

SIMON WELL 2

SIMON WELL 4

BRIDGE DECK

G ROAD

MATCH LINE

DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

DRAWN BY	JCS	DATE	2022
DESIGNED BY	JCS	DATE	2022
CHECKED BY	ALC	DATE	2022
APPROVED BY	TCP	DATE	2022

SCALE 0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
STAKING PLAN – 002

46

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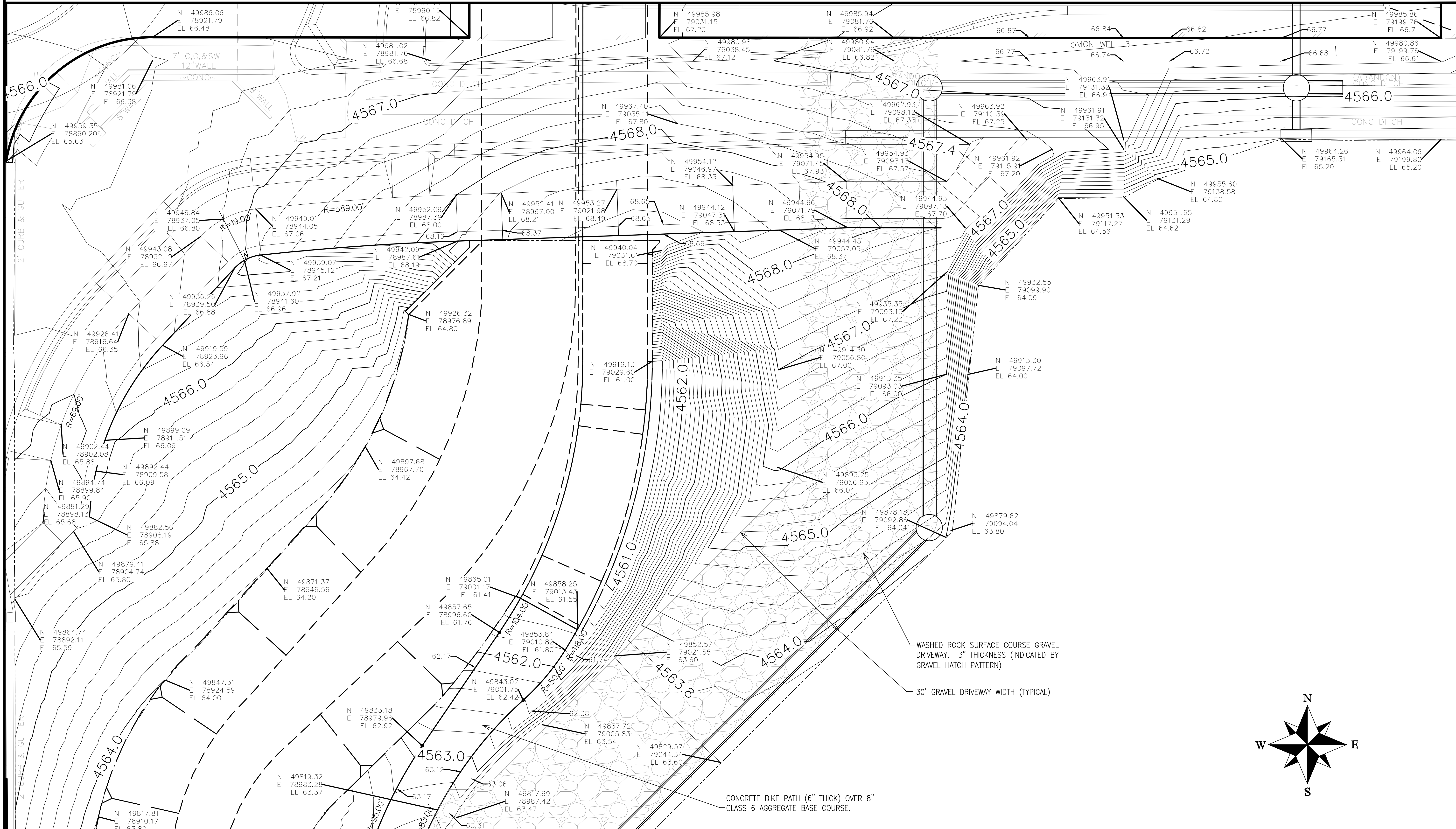

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DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

DRAWN BY	JCS	DATE	2022
DESIGNED BY	JCS	DATE	2022
CHECKED BY	ALC	DATE	2022
APPROVED BY	TCP	DATE	2022

SCALE 0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
STAKING PLAN – 003

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\STAKING PLAN PH 1.dwg, 4/23/2021 7:09:47 AM

MATCH LINE

N
W E
S

24 ROAD

CY ASPH

2' CURB & GUTTER

4564.6

4564.0

4563.0

4563.4

R=95.00'

R=85.00'

N 49808.70
E 78908.57
EL 63.74

N 49803.96
E 78892.20
EL 64.80

N 49791.97
E 78964.30
EL 63.64

N 49792.26
E 78978.60
EL 63.49

N 49791.89
E 79006.93
EL 63.26

N 49790.69
E 78974.22
EL 63.84

N 49749.28
E 78907.18
EL 63.34

N 49717.79
E 78904.71
EL 63.21

N 49674.46
E 78892.17
EL 63.73

N 49674.44
E 78912.00
EL 62.00

12" HDPE STM

12" HDPE STM

12" HDPE STM

12" HDPE STM

WASHED ROCK SURFACE COURSE GRAVEL DRIVEWAY. 3" THICKNESS (INDICATED BY GRAVEL HATCH PATTERN)

CONCRETE BIKE PATH (6" THICK) OVER 8" CLASS 6 AGGREGATE BASE COURSE.

MATCH LINE

MATCH LINE

DESCRIPTION	DATE
REVISION ⚠ REV. 1	– DATE
REVISION ⚠ REV. 2	– DATE
REVISION ⚠ REV. 3	– DATE
REVISION ⚠ REV. 4	– DATE

DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

SCALE 0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
STAKING PLAN – 004

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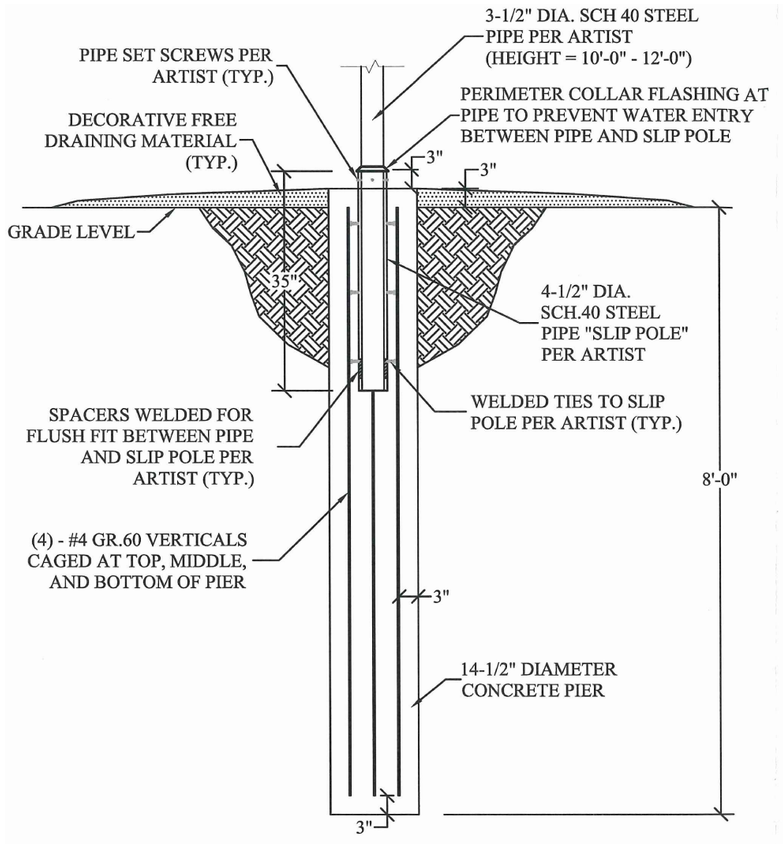
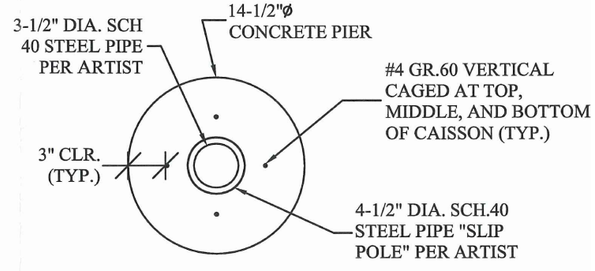


"ASPEN TREE" FOUNDATION PLAN

SCALE: 1/2" = 1'-0"

NOTES:

1. 2006 IBC, 90 MPH (3-SECOND GUST) EXP. C WIND.
2. SOIL SURROUNDING PIER ASSUMED TO BE NATURAL, UNDISTURBED SOIL OR IF FILL, COMPACTED TO 90% STD. PROCTOR. SOIL ASSUMPTIONS MUST BE VERIFIED BY AGENCY RESPONSIBLE FOR INTERCHANGE CONSTRUCTION PRIOR TO PIER INSTALLATION.
3. CONCRETE SHALL HAVE MIN. 3,000 PSI COMP. STRENGTH OR AS REQUIRED FOR APPLICABLE SULFATE RESISTANCE.



"ASPEN TREE" FOUNDATION SECTION

SCALE: 1" = 1'-0"

DESCRIPTION	DATE
REVISION ⚠ REV. 1	– DATE
REVISION ⚠ REV. 2	– DATE
REVISION ⚠ REV. 3	– DATE
REVISION ⚠ REV. 4	– DATE

DRAWN BY JCS	DATE 2022	SCALE
DESIGNED BY JCS	DATE 2022	AS SHOWN
CHECKED BY ALC	DATE 2022	
APPROVED BY TCP	DATE 2022	

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
ASPEN TREE FOUNDATION
DETAILS – 1

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\ASPEN TREE FOUNDATION DETAILS.dwg, 4/23/2021 7:11:56 AM

1. SITE DESCRIPTION

The Contractor shall comply with all City contractual requirements and all requirements associated with the SWMP on this project. The SWMP Administrator for Construction shall update to reflect current project site conditions.

A. PROJECT SITE LOCATION: Along the east side of 24 Road at the intersection of 24 Road and G Road. Location or address of construction office: 728 24 Road, Grand Junction, CO 81505

PROJECT SITE DESCRIPTION: The G Road Bridge Replacement Project is to replace a bridge over N. Leach Creek east of the intersection of 24 Rd and G Rd ahead of the proposed construction of a modern style roundabout at the same intersection. Along with replacement of the bridge the project will also include constructing a bike path crossing below G Road and adjacent to N. Leach Creek in a "Dry Dock" type structure, relocation of Utilities as needed to facilitate the bridge replacement, realignment of a portion of N. Leach Creek, and revegetation & Landscape improvement to both the north and south sides of bridge replacement. This is a 2019 Ballot Initiative funded project which includes unclassified excavation, aggregate base course, rip-rap, concrete pavement, asphalt pavement, bridge – dry dock – wall structures, utility relocations, pedestrian lighting, landscaping, and revegetation. The improvements whether by surface conveyance or via short laterals of pipe conveyance drain to Leach Creek which directly discharges to the Colorado River; erosion log slope protection is proposed at the top of bank of realigned N. Leach Creek and the Creek will be revegetated; Storm Drain inlet protection is proposed ahead of storm drain pipe conveyance into N. Leach Creek; erosion log slope protection is proposed between construction area and adjacent agriculture area to mitigate conveyance onto the agriculture area; final landscaping will be furnished per the landscaping plans in most other areas of disturbance immediately following construction efforts; other small pockets of disturbance not covered with paving, revegetation, or landscaping will be hydroseeded with a native seed mix per SGM plans.

C. PROPOSED SEQUENCING FOR MAJOR CONSTRUCTION ACTIVITIES: The project will begin with installation of tracking pad, concrete washout structure, and perimeter sediment controls, clearing and grubbing, utility relocation, all needed removals, grading of the construction area, installation of structures with excavation and realignment of N. Leach Creek, revegetation of N. Leach Creek, construction of bike path, final landscaping. Disturbed areas not otherwise covered with paving, revegetation, or landscaping will receive hydroseeding.

D. ACRES OF DISTURBANCE:

1. Total area of construction site (LOC (PERMITTED AREA)): 2.4 acres
2. Total area of proposed disturbance (LDA): 2.2 acres
3. Total area of seeding: 1.7 acres
4. Total area of pre-project impervious surface: 19,275 sq. ft.
5. Total area of final impervious surface: 21,780 sq. ft.

E. EXISTING SOIL DATA: The project site area is mapped as being colluvium, undivided, (Holocene and late Pleistocene) (Qac), as well as at the immediate surrounding areas. Alluvium generally consists of silt, sand and gravels and the colluvium generally consists of sandy silt, silty to clayey sand, and sandy clay.

F. EXISTING VEGETATION, INCLUDING PERCENT COVER:

Pre-Construction Date of survey: x/xx/xxxx %Density: xx%
Description of existing vegetation: xxxxxx

Post-Construction Date of survey: _____ %Density: _____
Description of existing vegetation: **Date of Permit Closure**: _____

G. POTENTIAL POLLUTANTS SOURCES: Sediment from ground disturbance and stockpiled soils, vehicle tracking of sediments, construction worker trash, both liquid and solid construction wastes, paints, solvents, adhesives, concrete washout water, asphalt waste, or any other material that could conceivably be dissolved in or carried by stormwater.

H. RECEIVING WATER:

1. Outfall locations: See site map
2. Names of immediate receiving water(s) on site: Leach Creek
3. Ultimate receiving water(s): Colorado River
4. Horizontal distance to nearest ultimate receiving water from project: 1.5 miles
5. Description of all stream crossings located within the Construction Site Boundary: North Leach Creek.

Location	Stream Name	Description Of Any Disturbed Upland Areas

I. NON-STORMWATER DISCHARGES:

Discharge Description	Location (Site Map #)	Method Statement (Location)
Dewatering*		
Concrete Wash Water (in-ground washout structure)	See site map	A Concrete Washout Structure shall be provided by the contractor
Landscape Irrigation Return Flows		
Emergency Fire Fighting		
Concrete Saw Water		

ALLOWABLE: Refer to CDPHE Low Risk Discharge Guidance Document of Uncontaminated Groundwater to Land.
https://www.colorado.gov/pacific/sites/default/files/WQ%20LOW%20RISK%20GW.pdf

*If ground water does not meet water quality standards for receiving water a separate CDPS Dewatering Permit shall be obtained by the Contractor from CDPHE.

2. SITE MAP COMPONENTS:

Pre-construction

A. PROJECT CONSTRUCTION POTENTIAL SITE BOUNDARIES See SWMP Site Map

B. ALL AREAS OF GROUND SURFACE DISTURBANCE See SWMP Site Map

C. AREAS OF CUT AND FILL See SWMP Site Map

D. LOCATION OF ALL STRUCTURAL CONTROL MEASURES IDENTIFIED IN THE SWMP See SWMP Site Map

E. LOCATION OF NON-STRUCTURAL CONTROL MEASURES AS APPLICABLE IN THE SWMP See SWMP Site Map

F. STREAMS, SPRINGS, WETLANDS AND OTHER STATE WATERS, INCLUDING AREAS THAT REQUIRE PRE-EXISTING VEGETATION BE MAINTAINED WITHIN 50 FEET OF A RECEIVING WATER See SGM's Wetlands Revegetation Plan.

G. PROTECTION OF TREES, SHRUBS AND CULTURAL RESOURCES N/A

H. Flow arrows that depict stormwater flow directions on-site and runoff direction See SWMP Site Map

I. AREAS USED FOR STORING AND STOCKPILING OF MATERIALS, STAGING AREAS (field trailer, fueling, etc.) WASTE ACCUMULATION and BATCH PLANTS INCLUDING MASONARY MIXING STATIONS See Staging Area Plan

J. LOCATIONS OF ALL STREAM CROSSINGS LOCATED WITHIN THE CONSTRUCTION SITE BOUNDARY See SWMP Site Map

3. QUALIFIED STORMWATER MANAGERS:

A. SWMP ADMINISTRATOR FOR DESIGN:

Name/Title	Contact Information [phone & email]	Certification #
Lee Cooper, Project Manager	970-256-4155 leec@gjcity.org	

B. SWMP Administrator for Construction: The Contractor shall designate a SWMP Administrator for Construction upon co-permittee of the permit. The SWMP Administrator for Construction shall become the operator for the SWMP and assume responsibility for all design changes to the SWMP implementation and maintenance. The SWMP Administrator for Construction shall be responsible for implementing, maintaining and revising SWMP, including the title and contact information. The activities and responsibilities of the SWMP Administrator for Construction shall address all aspects of the project's SWMP. (Update the information below for each new SWMP Administrator for Construction)

Name/Title	Contact Information (phone & email)	Certification #	Start Date	Engineer Approval
XXXXX XXXXXXX, Owner	970-XXX-XXXX XXXXconstruction@gmail.com		XX/XX/20XX	

C. EROSION CONTROL INSPECTOR: The Contractor may designate an Erosion Control Inspector. The Erosion Control Inspector shall complete duties in accordance with CDPHE and Mesa County MS4. An inspection of the site shall be performed every 7 calendar days.

Name/Title	Contact Information (phone & email)	Certification #	Start Date	Engineer Approval

4. STORMWATER MANAGEMENT CONTROLS FIRST CONSTRUCTION ACTIVITIES

THE CONTRACTOR SHALL PERFORM THE FOLLOWING:

A. POTENTIAL POLLUTANT SOURCES

Evaluate, identify, locate and describe all potential sources of pollutants at the site in accordance with and place in the SWMP. All control measures related to potential pollutants shall be shown on the SWMP Site Map by the Contractor's SWMP Administrator for Construction.

B. OFFSITE DRAINAGE (RUN ON WATER)

1. Describe and record control measures on the SWMP Site Map that have been implemented to address off site run-on water.

C. VEHICLE TRACKING PAD/VEHICLE TRACKING CONTROL

1. Control measures shall be implemented.

D. PERIMETER CONTROL

1. Perimeter control shall be established as the first item on the SWMP to prevent the potential for pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to state waters.
2. Perimeter control may consist of berms, silt fence, erosion logs, existing landforms, or other control measures as approved.

5. DURING CONSTRUCTION

RESPONSIBILITIES OF THE SWMP Administrator for Construction

The SWMP is a living document "living document" that is continuously reviewed and modified throughout the construction phasing. During construction, the following items shall be added, updated, or amended as needed by the SWMP Administrator for Construction.
During construction, indicate how items that have not been addressed during design are being handled in construction. If items are covered in the template or other sections of the SWMP, indicate below what section the discussion takes place.

A. SPILL PREVENTION AND RESPONSE PLAN (SPCC): Prior to project startup, the awarded contractor's personnel have been trained in the following spill control procedures:

- Spill control;
- Containment, vessel, tank, and piping inspection and maintenance;
- Spill response, containment, and clean-up;
- Company policies on reporting and responding to spills.

Environmentally Sensitive Areas:

All spillways, channels, and storm drainage that lead directly or indirectly to the receiving waters and/or pose a threat to ground water are identified as being environmentally sensitive. Extra care and preventative measures will be taken to minimize the risk of contamination to these areas.

Identification of Spill Cleanup Coordinators:

Responsibility	Name/Title	Contact Information (phone)
Primary SPCC	XXXX XXXXX, Owner	970-XXX-XXXX
Secondary SPCC		
On-site Spill Responder		
City Inspector	XXX XXXX	970-XXX-XXXX
City Project Engineer	Kirsten Armbruster, Project Engineer	970-462-2049

Location of Clean-up Kits:

Type of Spill Kit	Location(s)
Large Spill Kit	
Vehicle Kit	

Notification Procedures to be used in the event of an accident:

The Qualified Stormwater Manager shall be notified immediately after a spill on the project site. For **non-hazardous** materials which may endanger health or the environment, and for spills or discharge of hazardous substance or oil (which may cause pollution of the waters of the State), the following measures shall be implemented:

- Contact the CDPHE Environmental Emergency Spill Reporting Line (1-877-518-5608) within 24 hours of the spill event. A written notification to the CDPHE-EMP is necessary within 5 days.
- Report spill to the City Inspector and the City Project Engineer.

For spills involving **hazardous** materials the following measures shall be implemented:

- Contact the local emergency response team by dialing 911.
- Contact the CDPHE Environmental Emergency Spill Reporting Line (1-877-518-5608) within 24 hours of the spill event. A written notification to the CDPHE-EMP is necessary within 5 days.
- Report spill to the City Inspector and the City Project Engineer.

B. MATERIALS HANDLING:

Quantities of Chemicals and Locations Stored on Site Chemical storage shall be at least 50 horizontal feet from the ordinary high water line of any State water.

Material	Quantity	Staging/Storage Location(s)

Any products/chemicals that are located or stored onsite shall be properly labeled as to the contents of the material. The Material Safety Datasheets (MSDS) for all products/chemicals utilized onsite can be found in a notebook at the project trailer.

All chemicals and stockpiled materials stored on site shall be stored within berms or other secondary containment devices to prevent leaks and spills from contacting stormwater runoff.

C. STOCKPILE MANAGEMENT: Shall be done in accordance with subsection 107.25 and 208.07

D. CONCRETE WASHOUT: Concrete wash out water or waste from field laboratories and paving equipment shall be contained in accordance with subsection 208.05.

E. SAW CUTTING: Shall be done in accordance with subsection 107.25, 208.04, 208.05

F. STREET SWEEPING: Shall be done in accordance with subsection 208.04

6. INSPECTIONS

A. Inspections shall be performed every 7 calendar days in accordance with subsection 208.03(c).

7. CONTROL MEASURE MAINTENANCE

A. Maintenance shall be in accordance with subsection 208.04(f).

8. RECORD KEEPING

A. Records shall be kept in accordance with subsection 208.03(d).

9. INTERIM, PERMANENT STABILIZATON and LONG TERM STORMWATER MANAGEMENT

The Contractor shall comply with all interim stabilization and permanent stabilization requirements in accordance with subsection 208.04(e).

A. SEEDING PLAN

Seeding will be required for an estimated 0.9 acres of disturbed area within the construction limits which are not surfaced, permanently landscaped, or revegetated. The following types and rates shall be used:

COMMON NAME	BOTANICAL NAME	LBS. PLS PER ACRE
Western wheatgrass		7.5
Bluebunch wheatgrass		2.3
Indian ricegrass		1.0
Thickspike wheatgrass		2.3
Slender wheatgrass		9.5
Red Mexican Hat		0.5
Blanket flower		1.5
Western yarrow		0.5
TOTAL		25.00

B. SEEDING APPLICATION: Hydroseed all disturbed areas at the construction site per subsection 212. Soil compaction shall be minimized for areas where permanent stabilization will be achieved through vegetative cover.

C. LONG TERM STORMWATER MANAGEMENT

In addition to the seeding plan noted in item 9.A, a detention pond will be constructed control pollutants in stormwater discharges that will occur after construction operations are completed.

10. PRIOR TO PROJECT FINAL ACCEPTANCE

A. Partial Acceptance shall be in accordance with subsection 107.25 (d), 208.10 and 214.04. At the Partial Acceptance of the project, it shall be determined by the SWMP Administrator for Construction and the Engineer which temporary control measures shall remain until 70% revegetation is established or which shall be removed.
B. At the end of the project, all ditch checks shall either consist of temporary erosion logs (or equivalent) or permanent riprap.
C. All storm drains shall be cleaned prior to the Final Acceptance of the project.

EROSION LOG TOE OF SLOPE PROTECTION PER CDOT M STANDARD PLAN M-208-1 SHT 3 OF 11

2701-324-00-093
Northwest Corner of G and 24 Rd
USHER NV LLC

SEE REVEGETATION PLAN BY SGM (AREA SHADED BLUE)

2701-333-00-152
728 24 RD
CITY OF GRAND JUNCTION

CONSTRUCTION SITE BOUNDARY

SEE LANDSCAPE PLAN BY C.R.A. (AREA SHADED YELLOW)

STORM DRAIN INLET PROTECTION TYPE II PER CDOT M STANDARD PLAN M-208-1 SHT 5 OF 11

RIDGE LINE

STORM DRAIN INLET PROTECTION TYPE II PER CDOT M STANDARD PLAN M-208-1 SHT 5 OF 11 (3 EA)

G ROAD

PRE-FABRICATED VEHICLE TRACKING PAD

CONCRETE WASHOUT STRUCTURE PER CDOT M STANDARD PLAN M-208-1 SHT 1 OF 11

SEE LANDSCAPE PLAN BY C.R.A. (AREA SHADED YELLOW)

EROSION LOG TOE OF SLOPE PROTECTION PER CDOT M STANDARD PLAN M-208-1 SHT 3 OF 11

2945-051-18-001
2395 G RD
GOLDEN GATE PETROLEUM OF NEVADA LLC

EROSION LOG TOE OF SLOPE PROTECTION PER CDOT M STANDARD PLAN M-208-1 SHT 3 OF 11

CONSTRUCTION SITE BOUNDARY

24 ROAD

SEE REVEGETATION PLAN BY SGM (AREA SHADED BLUE)

STORM DRAIN INLET PROTECTION TYPE II PER CDOT M STANDARD PLAN M-208-1 SHT 5 OF 11 (NOT SHOWN, AT EXISTING INLET ABOUT 600-FT. SOUTH OF INTERSECTION OF 24 & G RD)

LEGEND:

SHEET FLOW CONVEYANCE – SEE PLANS FOR SURFACE TREATMENT

COLLECTED CONVEYANCE – GUTTER, EARTH DITCH, SWALE ETC.. PER PLANS

2945-042-00-018
Southeast Corner of 24 & G Rd
USHER NV LLC

N:\Landproj\(24 Road and G Road Intersection)\dwg\00 PHASE 1\SWMP.dwg, 4/23/2021 7:12:01 AM

DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

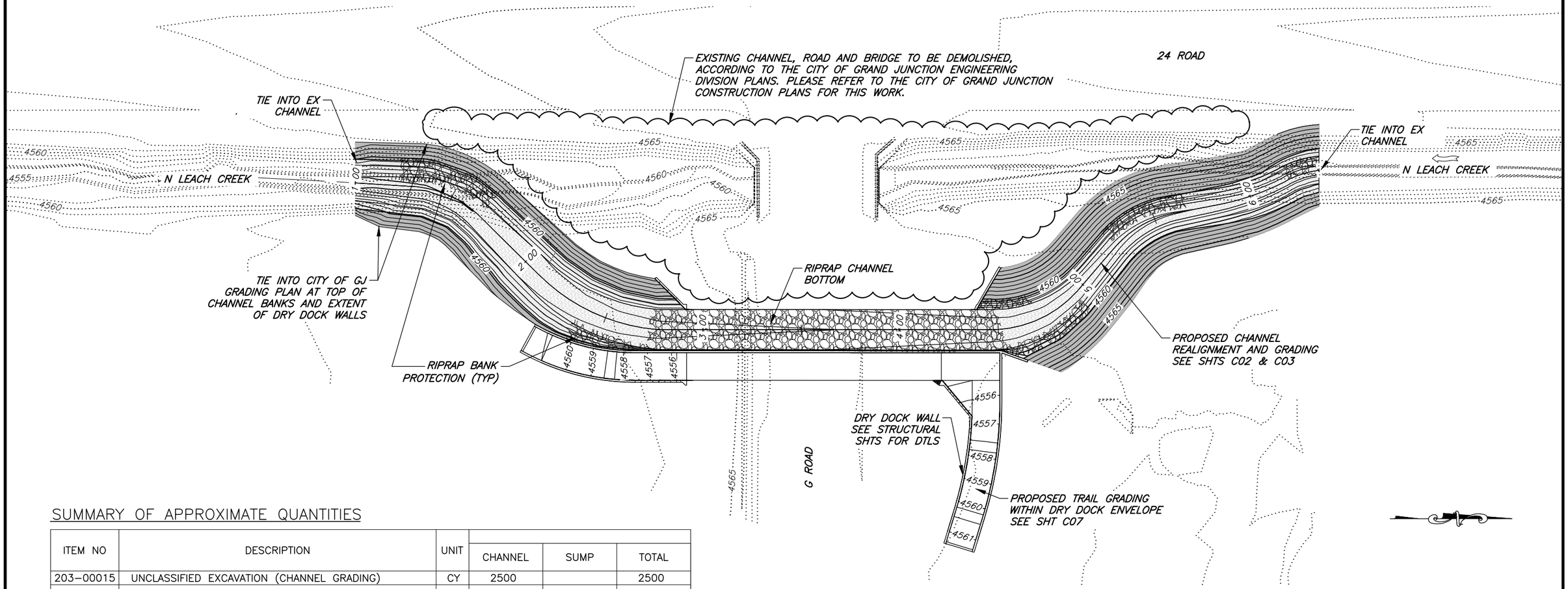
DRAWN BY JCS DATE 2022
DESIGNED BY JCS DATE 2022
CHECKED BY ALC DATE 2022
APPROVED BY TCP DATE 2022

SCALE 0 15 30 60

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.207-F1903L

G ROAD BRIDGE REPLACEMENT PROJECT
SWMP – 04 SITE MAP



SUMMARY OF APPROXIMATE QUANTITIES

ITEM NO	DESCRIPTION	UNIT	CHANNEL	SUMP	TOTAL
203-00015	UNCLASSIFIED EXCAVATION (CHANNEL GRADING)	CY	2500		2500
203-01030	COMPACTION (AASHTO T 99) (RIPRAP SUBGRADE PREP)	CY	136		136
206-00520	FILTER MATERIAL (CLASS B)	CY	68		68
420-00112	GEOTEXTILE (DRAINAGE) CLASS 1	SY	611		611
506-00209	RIPRAP (9 INCH)	CY	355		355
506-00212	RIPRAP (12 INCH)	CY	123		123
604-83104	4 INCH SCH 40 PVC PIPE WITH FITTINGS	LF		152	152
CUSTOM	4 INCH SDR 35 PVC PIPE (PERFORATED) WITH FITTINGS	LF		20	20
CUSTOM	2 INCH DR-26 IPS HDPE PIPE WITH FITTINGS	LF		200	200
CUSTOM	3 INCH SCH 40 STEEL PIPE WITH FITTINGS	LF		14	14

INDEX OF CIVIL DRAWINGS:

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY SMK DATE 4.7.21
DESIGNED BY KAR DATE 4.7.21
CHECKED BY ELK DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

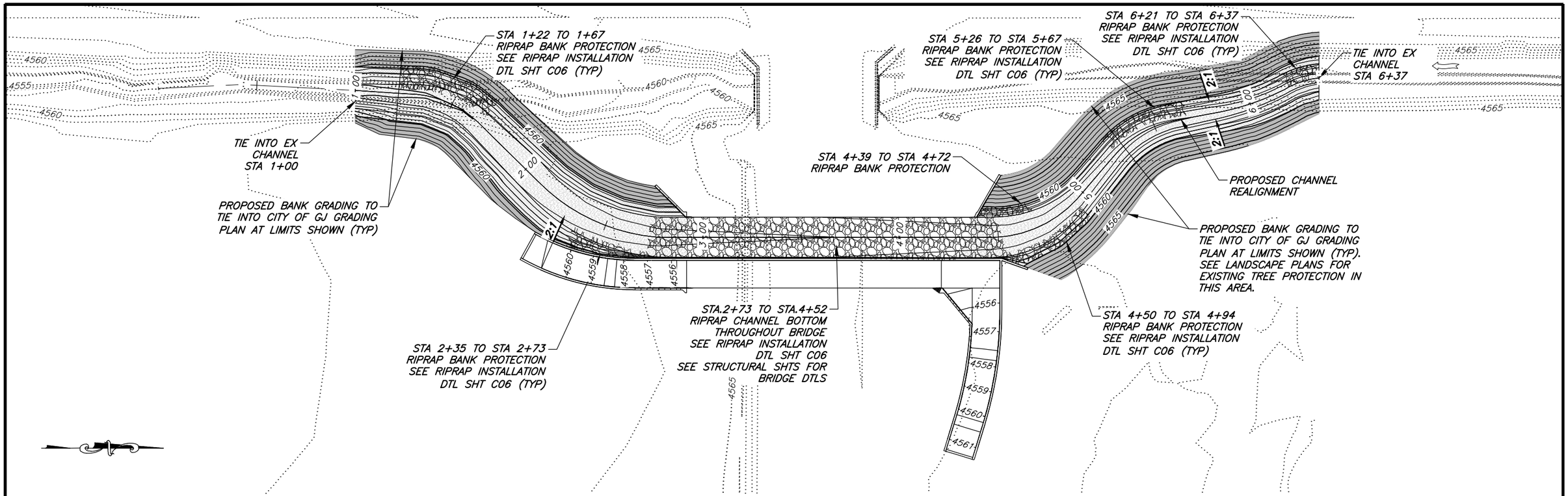
SCALES: PLAN 0 12.5 25 50

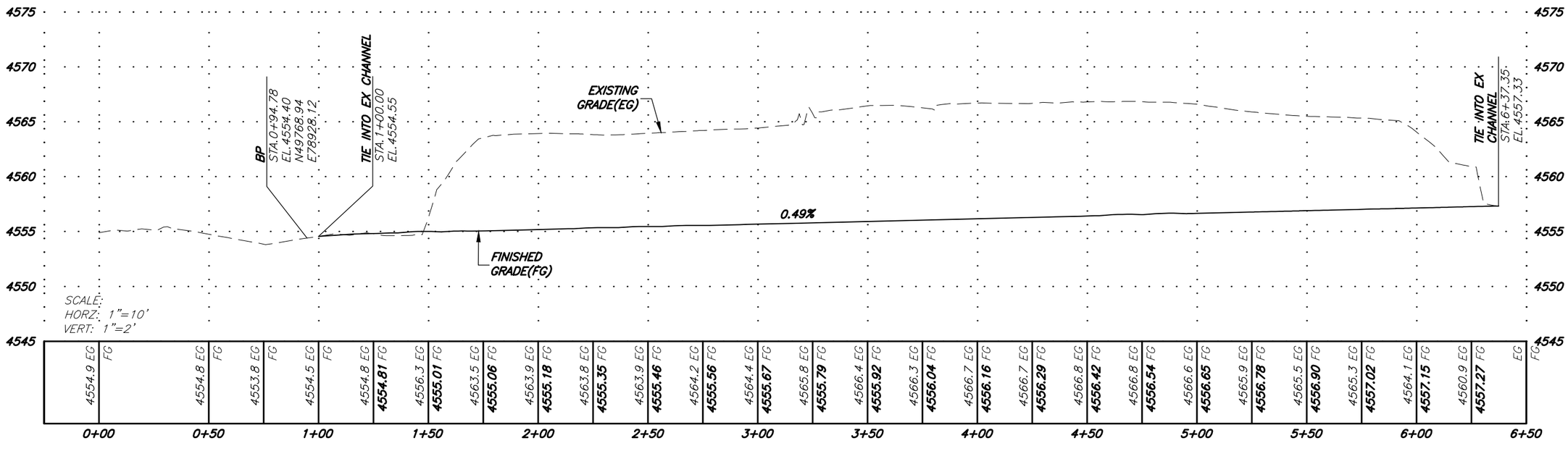
CITY OF Grand Junction COLORADO
SGM 259 Grand Ave, Suite 200 Grand Junction, CO 81506 970.245.2571 www.sgm-inc.com

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.SGM: 2020-385.001

G ROAD BRIDGE REPLACEMENT
N LEACH CREEK CHANNEL REALIGNMENT
OVERALL SITE PLAN AND SAQ

C01
54





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REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY SMK DATE 4.7.21
DESIGNED BY KAR DATE 4.7.21
CHECKED BY ELK DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

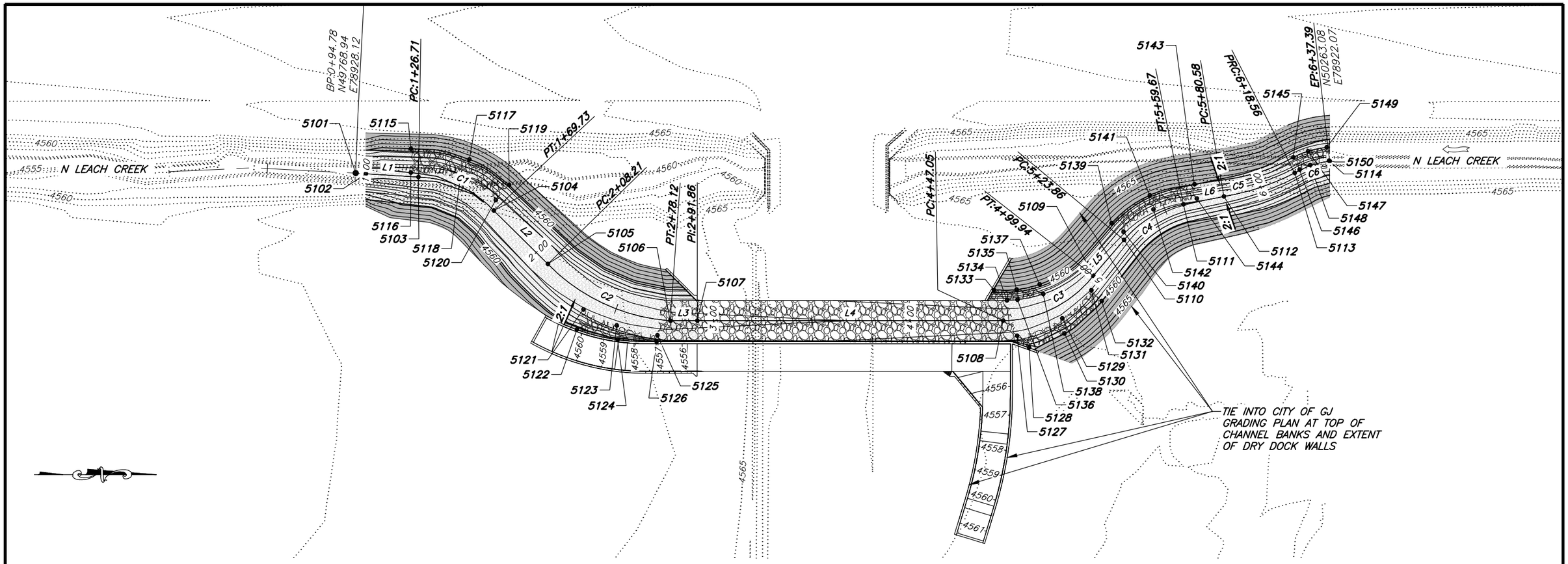
SCALES:
PLAN
0 12.5 25 50

CITY OF Grand Junction COLORADO
SGM
259 Grand Ave, Suite 200
Grand Junction, CO 81506
970.245.2571 www.sgm-inc.com

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.SGM: 2020-385.001

G ROAD BRIDGE REPLACEMENT
N LEACH CREEK CHANNEL
REALIGNMENT PLAN & PROFILE

C02
55



POINT TABLE			
POINT #	ELEVATION	NORTHING	EASTING
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5103	4554.82	49800.80	78930.12
5104	4555.03	49839.07	78947.13
5105	4555.22	49866.45	78974.18
5106	4555.56	49928.51	79002.94
5107	4555.63	49942.25	79002.94
5108	4556.39	50097.44	79002.96
5109	4556.65	50143.22	78980.15
5110	4556.77	50158.80	78961.99
5111	4556.95	50188.93	78943.92
5112	4557.05	50209.46	78939.98
5113	4557.24	50245.37	78928.05
5114	4557.33	50263.08	78922.07
5115	4560.00	49796.94	78915.75

POINT TABLE			
POINT #	ELEVATION	NORTHING	EASTING
5116	4555.00	49796.97	78927.90
5117	4559.99	49826.63	78921.22
5118	4555.37	49822.01	78930.97
5119	4560.00	49846.77	78934.09
5120	4555.50	49840.07	78941.75
5121	4556.10	49884.52	78997.29
5122	4560.71	49881.25	79007.38
5123	4556.22	49901.41	79005.32
5124	4561.00	49901.89	79012.51
5125	4556.34	49922.01	79010.30
5126	4560.50	49921.60	79013.50
5127	4557.23	50104.53	79010.58
5128	4560.90	50110.60	79016.58
5129	4557.19	50127.47	79001.78
5130	4560.01	50128.55	79009.43

POINT TABLE			
POINT #	ELEVATION	NORTHING	EASTING
5131	4557.03	50142.22	78987.49
5132	4560.00	50147.47	78992.99
5133	4560.00	50092.79	78987.46
5134	4557.42	50099.40	78992.64
5135	4560.00	50104.29	78987.21
5136	4557.43	50104.71	78992.35
5137	4560.00	50115.91	78984.53
5138	4557.39	50117.77	78989.41
5139	4560.00	50152.47	78953.53
5140	4557.07	50158.49	78957.96
5141	4560.00	50171.83	78939.35
5142	4557.14	50173.73	78946.55
5143	4560.00	50194.49	78933.81
5144	4557.14	50195.68	78941.04
5145	4560.00	50244.63	78920.08

POINT TABLE			
POINT #	ELEVATION	NORTHING	EASTING
5146	4557.28	50247.86	78926.35
5147	4560.01	50252.17	78917.01
5148	4557.31	50253.14	78924.07
5149	4559.99	50261.59	78915.06
5150	4557.35	50262.77	78921.83

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	53.75'	43.02'	22.74'	41.88'	N23°57'35"E	45° 51' 37"
C2	96.74'	69.91'	36.56'	68.40'	N24°51'57"E	41° 24' 19"
C3	59.31'	52.88'	28.34'	51.15'	N26°29'23"W	51° 05' 18"
C4	52.96'	35.81'	18.62'	35.13'	N30°56'44"W	38° 44' 17"
C5	125.75'	37.98'	19.14'	37.84'	N18°23'04"W	17° 18' 17"
C6	44.54'	18.83'	9.56'	18.69'	N18°39'25"W	24° 13' 34"

LINE TABLE		
LINE	BEARING	LENGTH
L1	N3°35'46"E	31.93'
L2	N44°39'14"E	38.48'
L3	N0°00'24"E	13.74'
L4	N0°00'24"E	155.19'
L5	N49°21'34"W	23.93'
L6	N10°52'05"W	20.90'

DESCRIPTION	DATE
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REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY SMK DATE 4.7.21
DESIGNED BY KAR DATE 4.7.21
CHECKED BY ELK DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES:
PLAN
0 12.5 25 50

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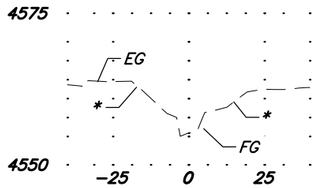
G ROAD BRIDGE REPLACEMENT
N LEACH CREEK CHANNEL
REALIGNMENT LAYOUT POINT TABLES

C03
56



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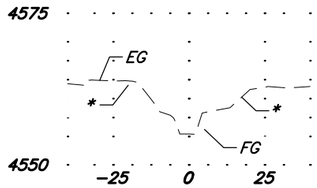

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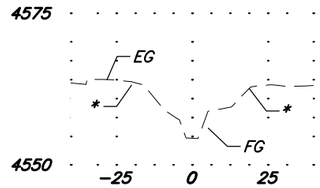

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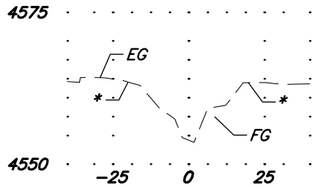

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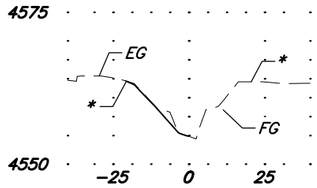

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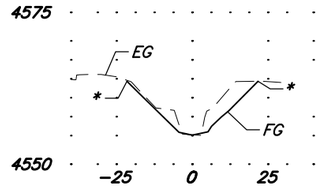

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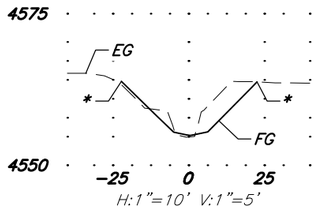

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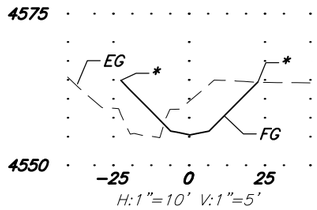

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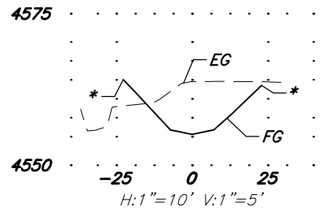

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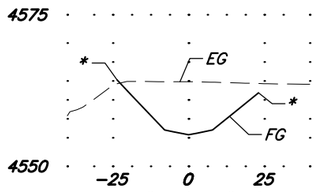

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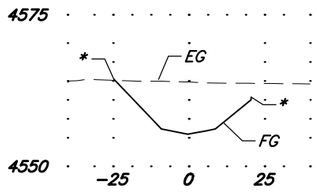

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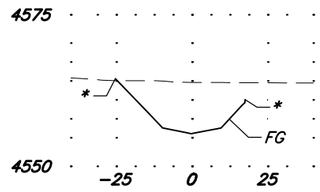

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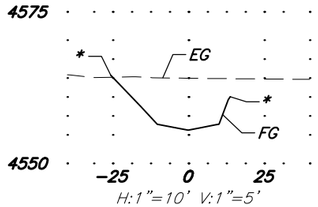

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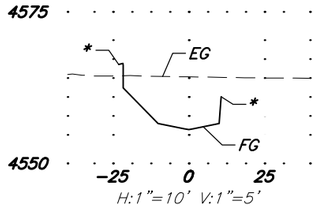

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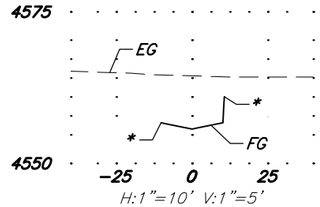

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* EXTENTS OF SGM CHANNEL GRADING: TIE INTO SGM BRIDGE PLANS, CITY OF GRAND JUNCTION GRADING PLANS, OR CITY OF GRAND JUNCTION TRAIL GRADING PLANS, SEE SGM BRIDGE SHEETS AND CITY OF GRAND JUNCTION CONSTRUCTION PLANS.

DESCRIPTION	DATE
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REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY SMK DATE 4.7.21
DESIGNED BY KAR DATE 4.7.21
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G ROAD BRIDGE REPLACEMENT
N LEACH CREEK CHANNEL
REALIGNMENT SECTIONS

C04
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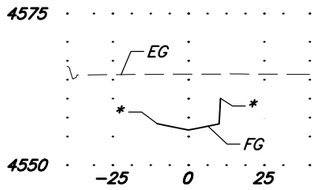

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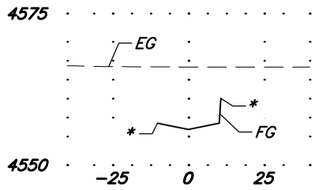

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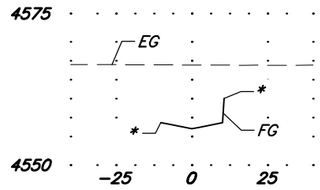

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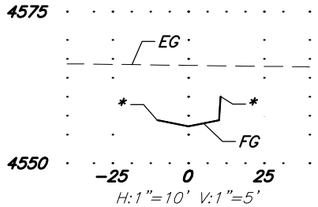

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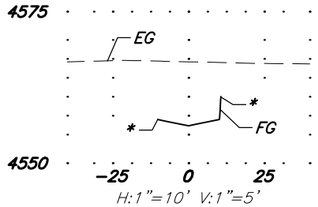

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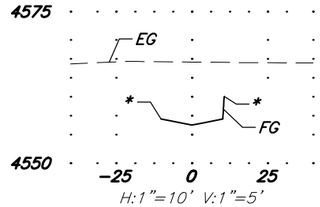

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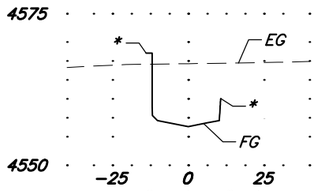

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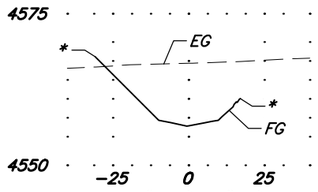

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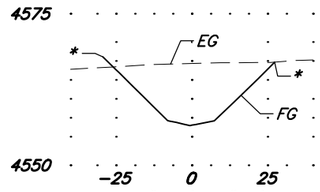

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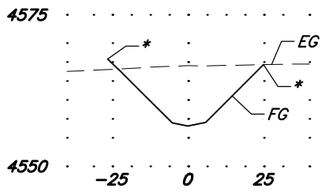

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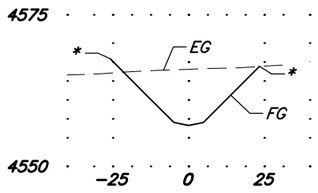

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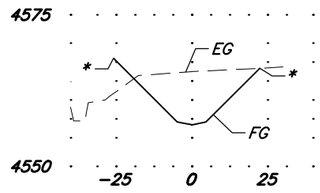

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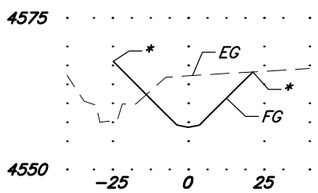

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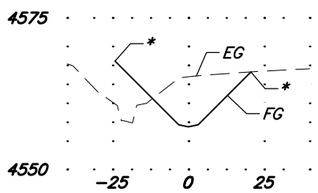

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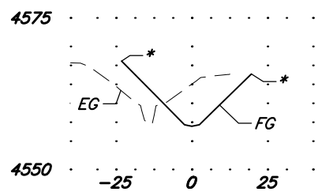

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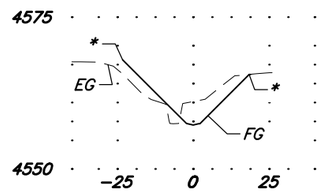

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G ROAD BRIDGE REPLACEMENT
N LEACH CREEK CHANNEL
REALIGNMENT SECTIONS (2)

C05

PART 1 GENERAL

1.01 SUMMARY

A. THIS SPECIFICATION COVERS THE QUALITY OF ROCK AND GENERAL PLACEMENT METHODS TO BE USED IN THE CONSTRUCTION OF ROCK RIPRAP.

1.02 REFERENCES

A. COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION – SECTION 506. RIPRAP GRADATION AND PLACEMENT IS BASED ON THIS REFERENCE.

1.03 SUBMITTALS

A. PRODUCT DATA: PROVIDE SUPPLIER'S SIZE OF RIPRAP STONES: MEAN SPHERICAL DIAMETER, ANGULAR SHAPE, WEIGHT, LENGTH, AND WIDTH.

PART 2 PRODUCTS

2.01 MATERIALS

A. SIZES OF RIP RAP FOR THIS PROJECT SHALL MEET THE REQUIREMENT PRESENTED IN THE TABLE ON THIS SHEET.

B. QUALITY – SHALL BE SUITABLE ONSITE ROCK CRUSHED AND SCREENED WITH SPECIFIC GRAVITY OF AT LEAST 2.55. IF AN ALTERNATIVE SOURCE IS PROPOSED, THE CONTRACTOR SHALL FURNISH TEST RESULTS TO THE ENGINEER DEMONSTRATING THE FOLLOWING MATERIAL PROPERTIES ARE MET.
   1. SG ≥ 2.55
   2. LA ABRASION (ASTM C535) = 50% LOSS (MAX) OR APPROVED EQUAL TESTING METHOD

PART 3 EXECUTION

3.01 PREPARATION AND PLACEMENT

A. RIPRAP MAY BE DUMPED FROM A HEIGHT NO GREATER THAN 3' WITH HAND SORTING TO ACHIEVE A STABLE AND WELL GRADED SURFACE FINISH.

B. PLACEMENT OF THE RIPRAP SHOULD FOLLOW IMMEDIATELY AFTER PLACEMENT OF THE GEOTEXTILE FABRIC AND CLASS B FILTER MATERIAL WITH NO MORE THAN ONE WEEK BETWEEN PLACEMENT OF THE FABRIC AND FULL COVERAGE BY RIPRAP. PLACE RIPRAP SO THAT IT FORMS A DENSE MASS OF STONE WITH MINIMUM VOIDS.

C. ROCKS SHOULD BE PLACED IN UNIFORM LIFTS.

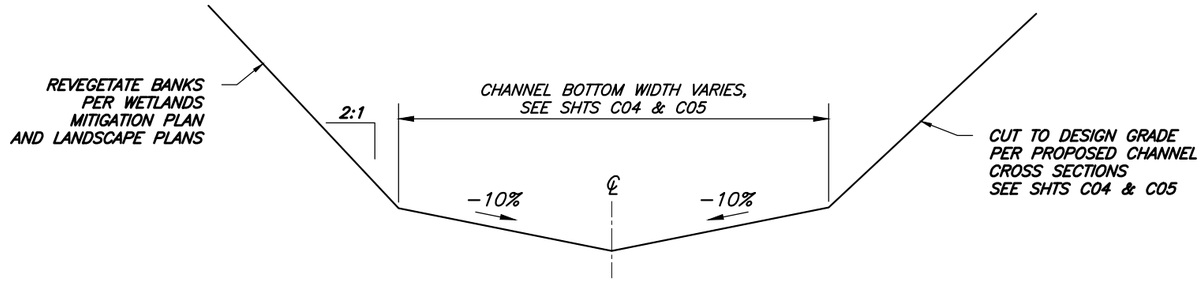
Table 506-2

Pay Item	Stone Size d50[1] (Inches)	Percent of Material Smaller Than Typical Stone[2]	Typical Stone Dimensions[3] (Inches)	Typical Stone Weight[4] (Pounds)
Riprap	6	70-100 50-70 35-50 2-10	12 9 6 2	85 35 10 0.4
Riprap	9	70-100 50-70 35-50 2-10	15 12 9 3	160 85 35 1.3
Riprap	12	70-100 50-70 35-50 2-10	21 18 12 4	440 275 85 3
Riprap	18	100 50-70 35-50 2-10	30 24 18 6	1280 650 275 10
Riprap	24	100 50-70 35-50 2-10	42 33 24 9	3500 1700 650 35

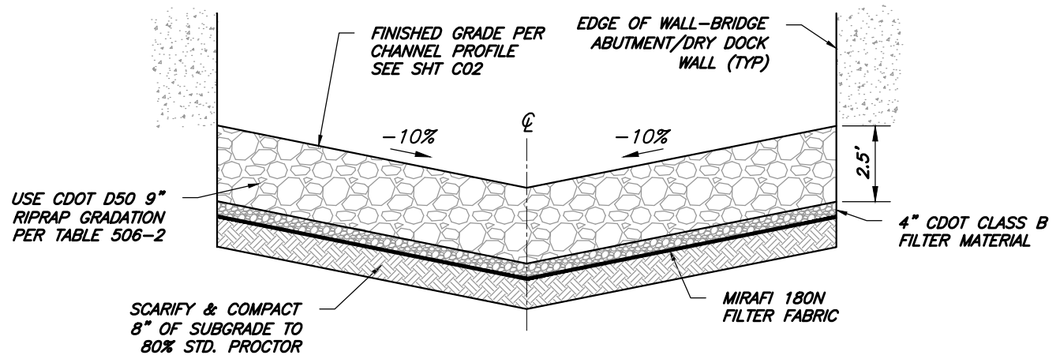
[1]d50 = nominal stone size
[2]based on typical rock mass
[3]equivalent spherical diameter
[4]based on a specific gravity = 2.5

RIP RAP NOTES:

1. PARTICLE SIZE D CORRESPONDS TO THE INTERMEDIATE "B" AXIS OF THE PARTICLE.
2. WEIGHT LIMITS FOR EACH CLASS ARE ESTIMATED FROM PARTICLE SIZE BY: $W=0.85(\gamma SD3)$ WHERE D CORRESPONDS TO THE INTERMEDIATE ("B") AXIS OF THE PARTICLE AND PARTICLE SPECIFIC GRAVITY IS TAKEN AS 2.65.



TYP. UPSTREAM/DOWNSTREAM CHANNEL SECTION
SCALE: NTS



TYP. UNDER BRIDGE CHANNEL SECTION
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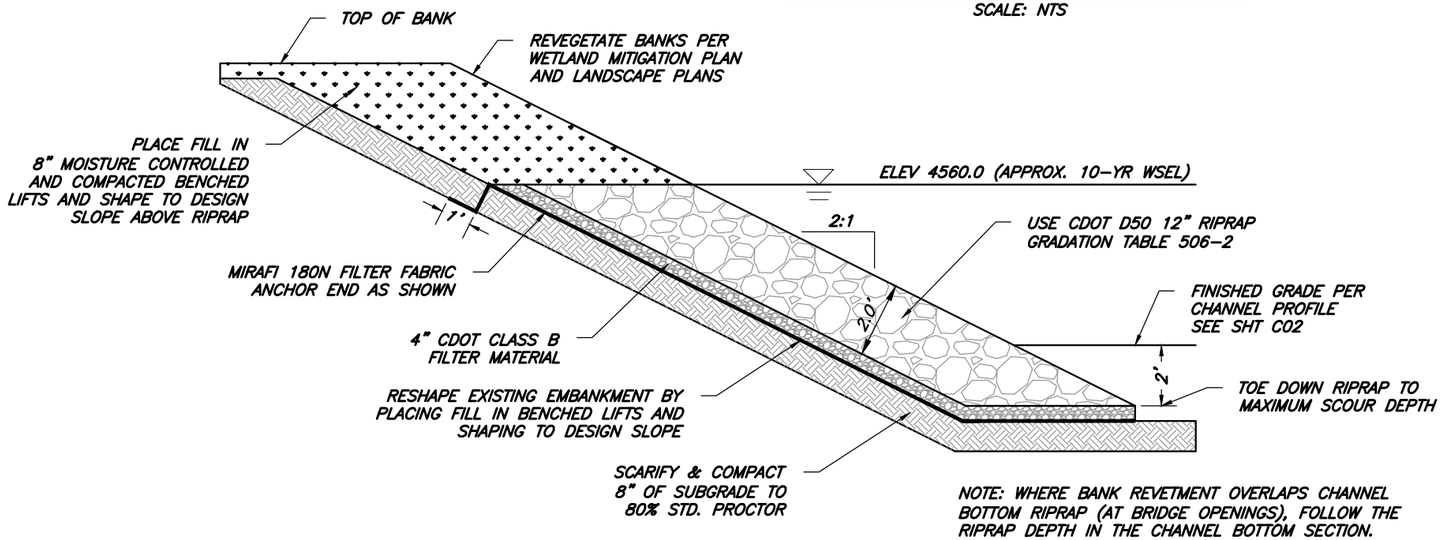

RIPRAP BANK REVETMENT WITH BURIED TOE
SCALE: NTS

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY SMK DATE 4.7.21
DESIGNED BY KAR DATE 4.7.21
CHECKED BY ELK DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES:

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PROJECT NO.SGM: 2020-385.001

G ROAD BRIDGE REPLACEMENT
N LEACH CREEK CHANNEL REALIGNMENT DETAILS

C06
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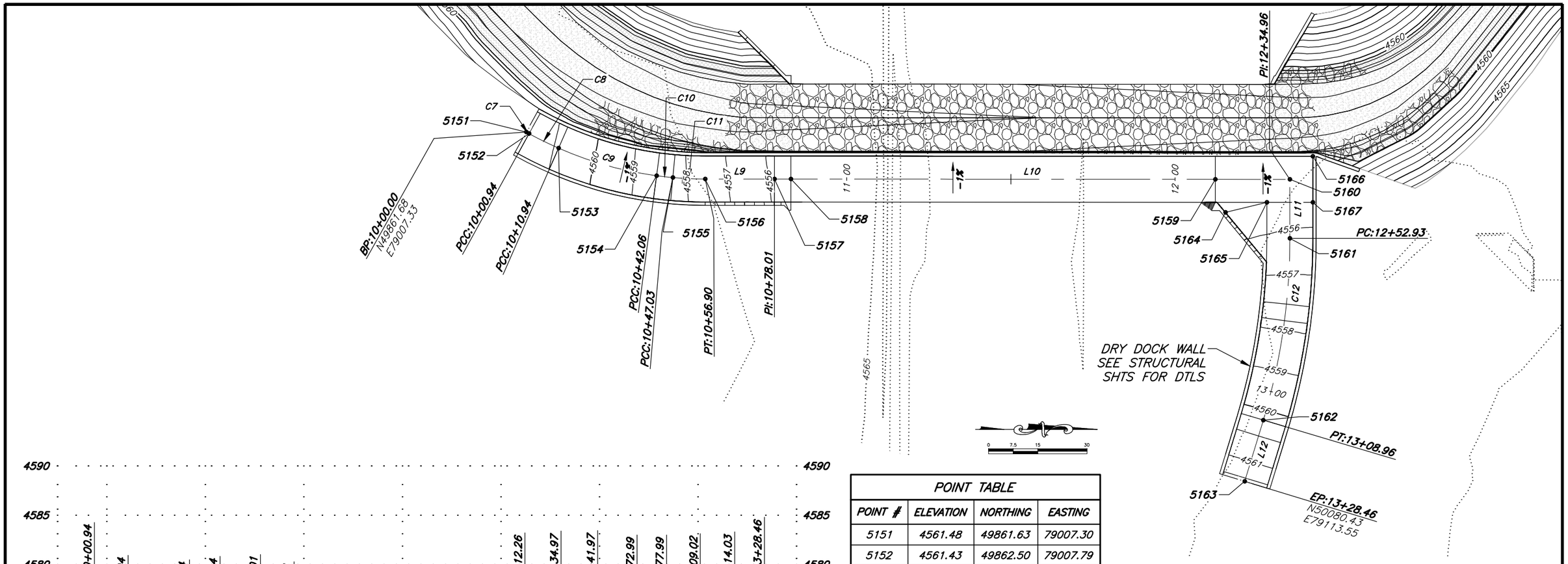

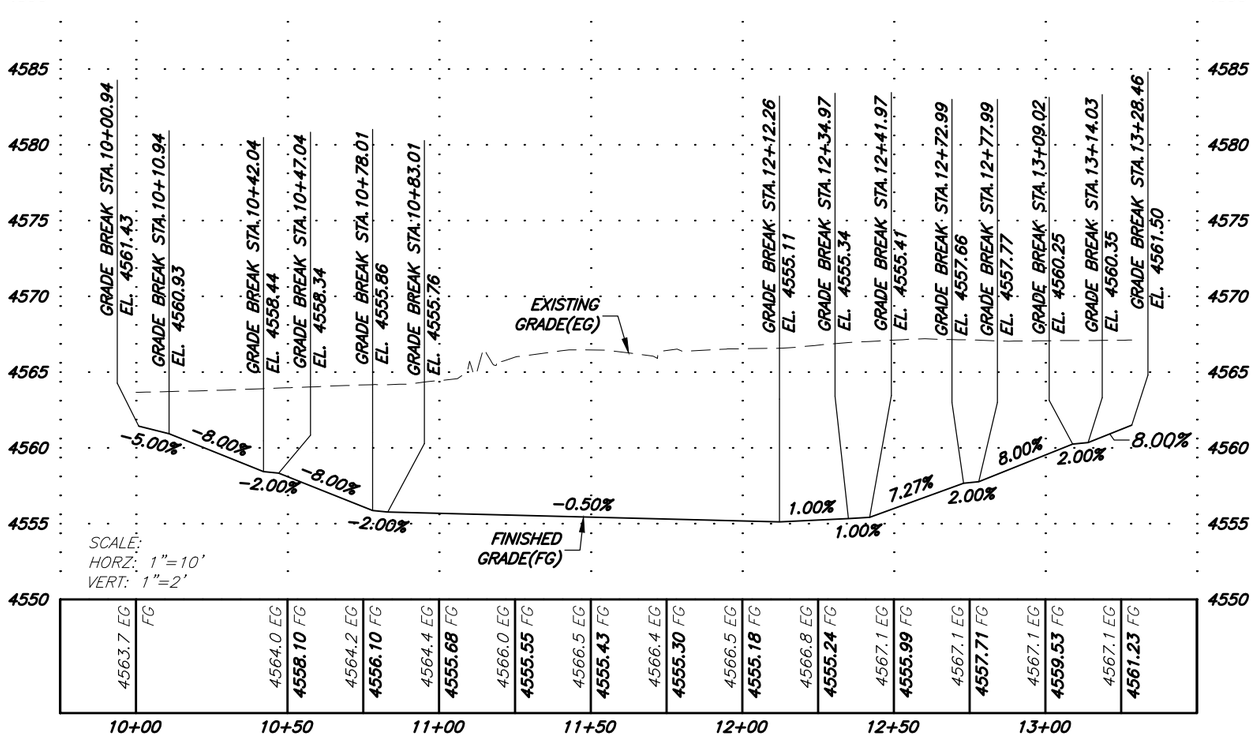

POINT TABLE

POINT #	ELEVATION	NORTHING	EASTING
5151	4561.48	49861.63	79007.30
5152	4561.43	49862.50	79007.79
5153	4560.93	49871.46	79012.22
5154	4558.44	49901.33	79020.60
5155	4558.34	49906.27	79021.16
5156	4557.55	49916.12	79021.59
5157	4555.86	49937.24	79021.60
5158	4555.76	49942.24	79021.61
5159	4555.11	50071.48	79021.70
5160	4555.34	50094.19	79021.70
5161	4556.21	50094.19	79039.66
5162	4560.25	50086.09	79094.96
5163	4561.50	50080.43	79113.55
5164	4555.22	50074.55	79031.77
5165	4555.34	50087.19	79028.69
5166	4555.34	50101.18	79014.72
5167	4555.48	50101.17	79028.69

LINE TABLE

LINE	BEARING	LENGTH
L9	N0°01'38"E	21.11'
L10	N0°01'57"E	156.95'
L11	N90°00'00"E	17.96'
L12	S73°03'26"E	19.50'

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C7	111.00'	0.94'	0.47'	0.94'	N29°07'59"E	0° 29' 08"
C8	111.02'	10.00'	5.00'	10.00'	N26°18'34"E	5° 09' 38"
C9	110.49'	31.12'	15.67'	31.02'	N15°40'39"E	16° 08' 21"
C10	94.02'	4.96'	2.48'	4.96'	N6°29'50"E	3° 01' 32"
C11	106.16'	9.87'	4.94'	9.87'	N2°29'39"E	5° 19' 42"
C12	193.00'	56.03'	28.22'	55.84'	S81°40'58"E	16° 38' 04"

DESCRIPTION	DATE
REVISION 1	
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REVISION 4	

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SCALES:
PLAN
0 7.5 15 30

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G ROAD BRIDGE REPLACEMENT
DRY DOCK TRAIL PLAN & PROFILE & POINT TABLE

C07
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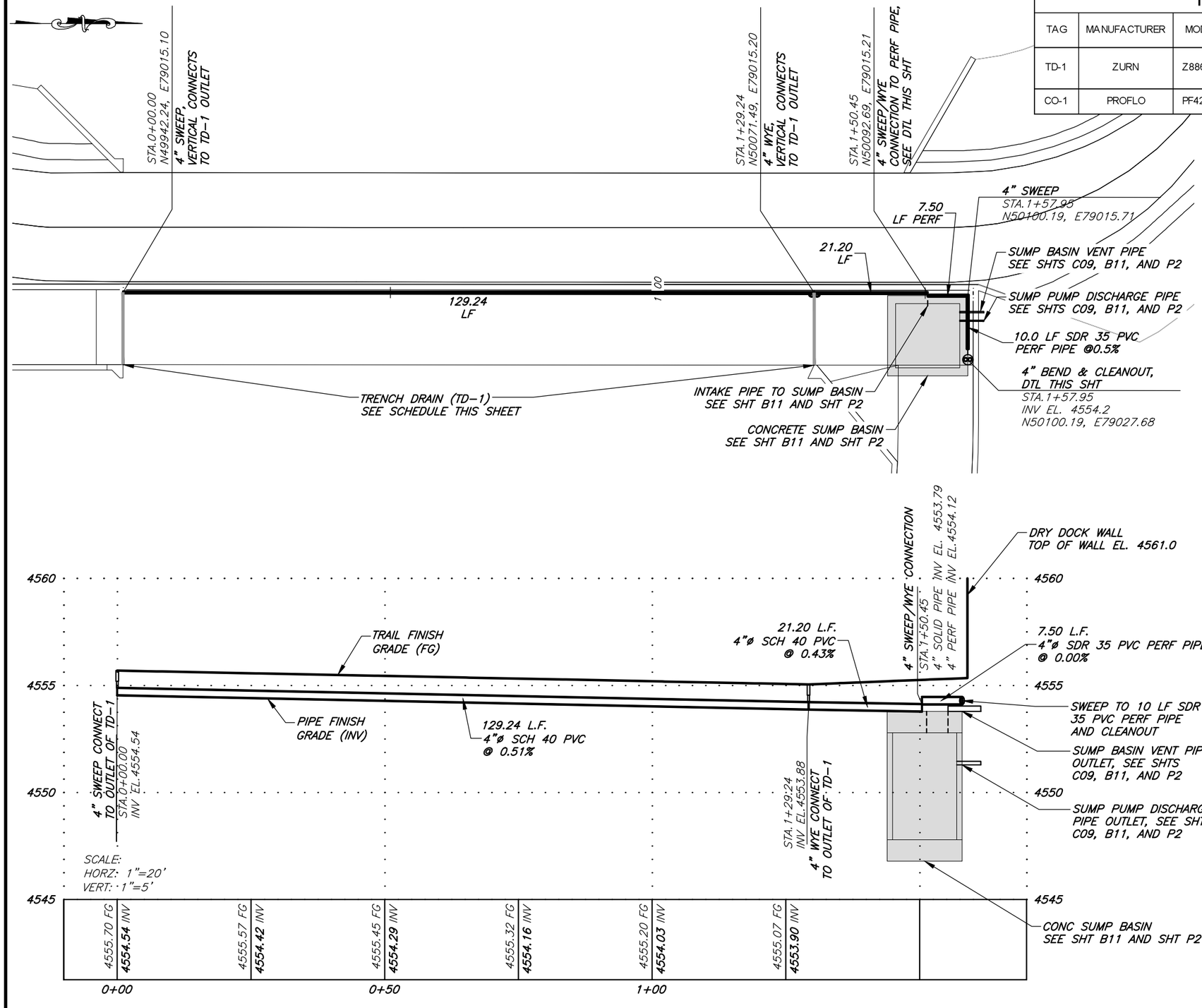
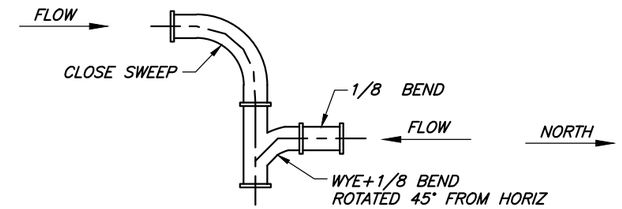
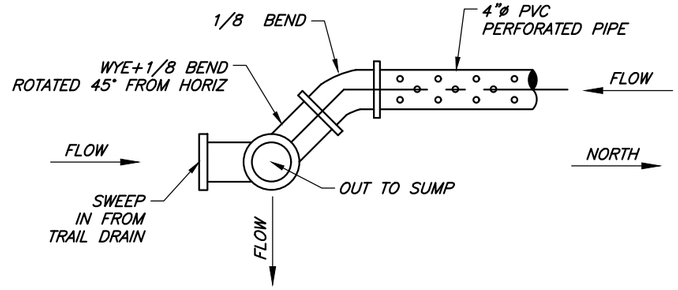
TRENCH DRAIN SYSTEM SCHEDULE

TAG	MANUFACTURER	MODEL	DESCRIPTION	TOTAL LENGTH (FT)
TD-1	ZURN	Z886-U6	6" WIDE REVEAL TRENCH DRAIN SYSTEM WITH P6-HPDE HEEL PROOF SLOTTED WIDE GRATE OR APPROVED EQUIVALENT. NO-HUB 6" BOTTOM OUTLET.	14
CO-1	PROFLO	PF42809	4" ADJUSTABLE PVC HUB FIT CLEANOUT WITH 6 IN. BRASS COVER	--



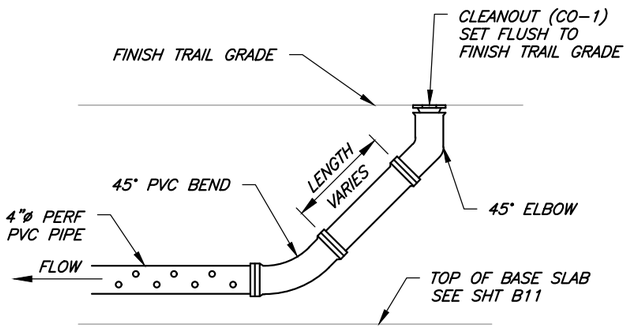


PLAN VIEW



SECTION VIEW

PERFORATED PIPE SWEEP/WYE CONNECTION
NTS



CLEAN-OUT DETAIL (CO)
NTS

NOTE:

- LOCATE DRAIN IN 1" CROSS SLOPE LANDING OF FINISHED TRAIL SURFACE, NOT IN RAMP SECTION

DESCRIPTION	DATE
REVISION 1	
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REVISION 3	
REVISION 4	

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APPROVED BY ELK DATE 4.7.21

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G ROAD BRIDGE REPLACEMENT TRAIL DRAIN PLAN & PROFILE

C08
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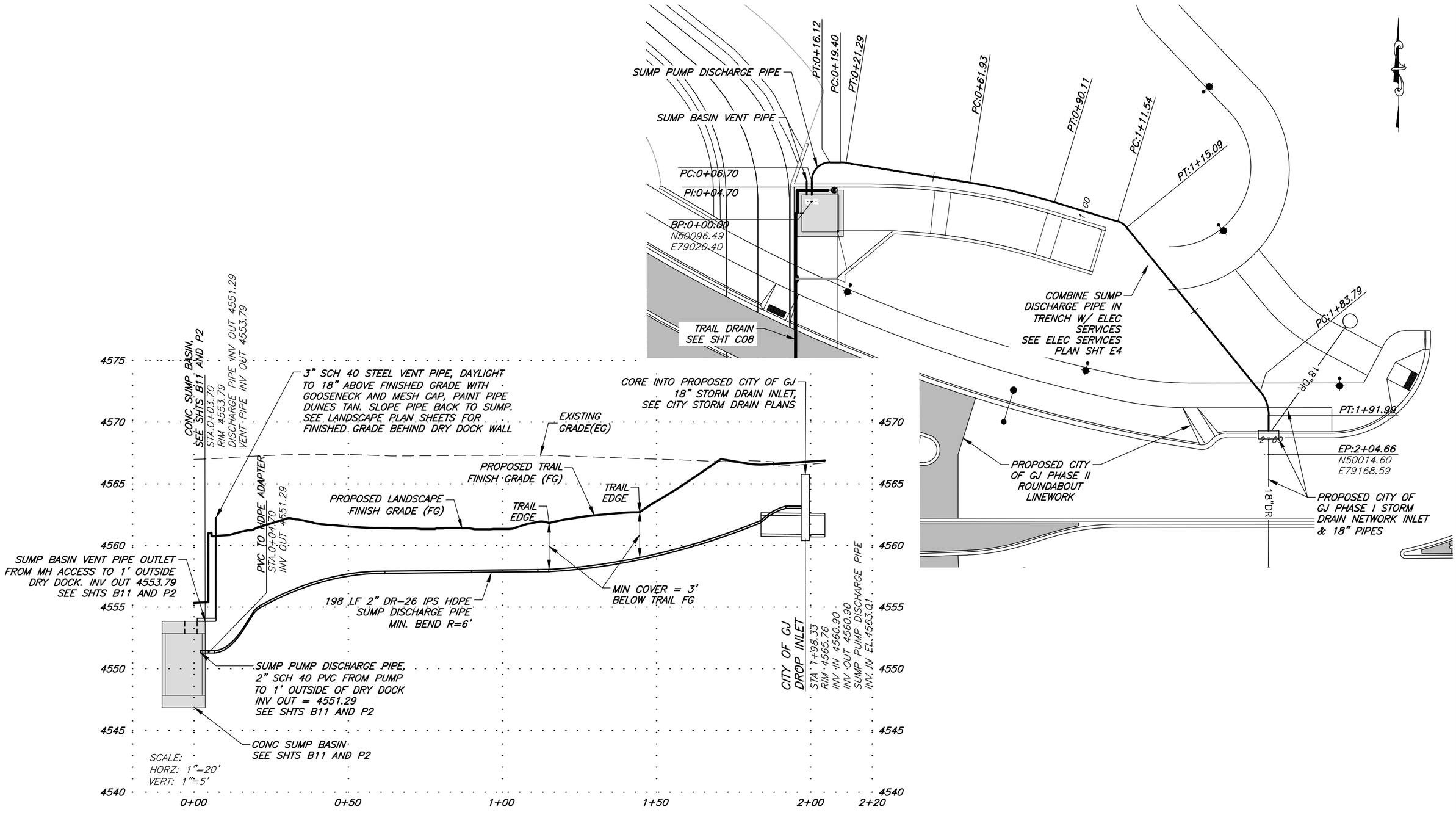

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SCALES: PLAN 0 7.5 15 30

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G ROAD BRIDGE REPLACEMENT
SUMP DISCHARGE
PLAN & PROFILE

C09

EXISTING UTILITY NOTES – "SUE–REQUIRED PROJECT" COMPLIANT

1. THIS PROJECT DOES MEET THE CONDITIONS FOR A "SUBSURFACE UTILITY ENGINEERING–REQUIRED PROJECT," AS SET FORTH IN THE 8/8/2018 COLORADO STATE LAW. REFER TO THE "COLORADO REVISED STATUTES (CRS) 2018 TITLE 9–1.5–102 SUBSURFACE UTILITY ENGINEERING (SUE) REQUIRED PROJECT COMPLIANCE CHECKLIST" TABLE BELOW FOR REFERENCE TO THESE CONDITIONS.

2. UTILITIES ARE DEPICTED ON THESE PLANS IN ACCORDANCE WITH THEIR ACHIEVED "QUALITY LEVELS" AS DEFINED IN THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) DOCUMENT ASCE 38, "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." LOCATION OF EXISTING UTILITIES IS DEPICTED ACCORDING TO THE BEST AVAILABLE INFORMATION, ARE NOT GUARANTEED TO BE ALL INCLUSIVE, AND REPRESENT CONDITIONS AT THE TIME OF DATA COLLECTION. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING UTILITIES WITH THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AND/OR UTILITY COMPANIES. ALL COSTS ASSOCIATED WITH FIELD VERIFICATION OF LOCATION AND DEPTHS OF UTILITIES FOR DAMAGE PREVENTION SHALL BE BORNE BY THE CONTRACTOR AND SHALL BE COMPLETED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR NEWLY ACQUIRED UTILITY DATA.

3. UTILITY QUALITY LEVELS ARE GENERALLY DEFINED BELOW. REFER TO ASCE 38 FOR MORE INFORMATION:

   3.1 UTILITY QUALITY LEVEL "D" (QLD) – A VALUE ASSIGNED TO A SUBSURFACE UNDERGROUND UTILITY SEGMENT OR UTILITY FEATURE, WHOSE ESTIMATED POSITION IS JUDGED THROUGH UTILITY RECORDS, INFORMATION FROM OTHERS (SUCH AS UNCC 811 FIELD MARKS), OR FROM VISUAL CLUES SUCH AS PAVEMENT CUTS, OBVIOUS TRENCHES, OR EXISTENCE OF SERVICE.

   3.2 UTILITY QUALITY LEVEL "C" (QLC) – A VALUE ASSIGNED TO A SUBSURFACE UTILITY SEGMENT, WHOSE ESTIMATED POSITION IS JUDGED THROUGH CORRELATING UTILITY RECORDS OR SIMILAR EVIDENCE TO UTILITY FEATURES, VISIBLE ABOVE AND/OR BELOW GROUND.

   3.3 UTILITY QUALITY LEVEL "B" (QLB) – A VALUE ASSIGNED TO A SUBSURFACE UTILITY SEGMENT OR SUBSURFACE UTILITY FEATURE WHOSE EXISTENCE AND POSITION IS BASED UPON GEOPHYSICAL METHODS COMBINED WITH PROFESSIONAL JUDGMENT AND WHOSE LOCATION IS TIED TO THE PROJECT SURVEY DATUM.

   3.4 UTILITY QUALITY LEVEL "A" (QLA) – A VALUE ASSIGNED TO THAT PORTION OF A SUBSURFACE UTILITY SEGMENT OR SUBSURFACE UTILITY FEATURE THAT IS DIRECTLY EXPOSED (OR VERIFICATION OF PREVIOUSLY EXPOSED AND SURVEYED UTILITIES), MEASURED, AND WHOSE LOCATION AND DIMENSIONS ARE TIED TO THE PROJECT SURVEY DATUM. (E.G. A TEST HOLE OR TEST PIT.)

4. RELIANCE UPON THESE DATA FOR RISK MANAGEMENT PURPOSES DURING BIDDING DO NOT RELIEVE THE EXCAVATOR OR UTILITY OWNER FROM FOLLOWING ALL APPLICABLE UTILITY DAMAGE PREVENTION STATUTES, POLICIES, AND/OR PROCEDURES DURING EXCAVATION. IT IS IMPORTANT THAT THE CONTRACTOR INVESTIGATES AND UNDERSTANDS THE SCOPE OF WORK BETWEEN THE PROJECT OWNER AND THEIR ENGINEER REGARDING THE SCOPE AND LIMITS OF THE UTILITY INVESTIGATIONS LEADING TO THESE UTILITY DEPICTIONS.

5. THE CONTRACTOR SHALL COMPLY WITH COLORADO REVISED STATUTES (CRS) 2018, TITLE 9, ARTICLE 1.5, "EXCAVATION REQUIREMENTS", WHEN EXCAVATING OR GRADING IS PLANNED IN THE AREA OF UNDERGROUND UTILITY FACILITIES. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITIES AT LEAST TWO (2) BUSINESS DAYS, NOT INCLUDING THE ACTUAL DAY OF NOTICE, PRIOR TO COMMENCING SUCH OPERATIONS. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 811 OR 800–922–1987, TO HAVE LOCATIONS OF UNCC REGISTERED LINES MARKED BY MEMBER COMPANIES. ALL OTHER UNDERGROUND FACILITIES SHALL BE LOCATED BY CONTACTING THE RESPECTIVE OWNER.

6. SHOULD THE CONTRACTOR ENCOUNTER UNKNOWN AND/OR ABANDONED UTILITY FACILITIES THE CONTRACTOR SHALL VERIFY WITH THE RESPECTIVE UTILITY OWNER THAT THE UTILITY MATERIAL IS INACTIVE/ABANDONED BEFORE REMOVAL FROM THE WORK AREA.

7. THE CONTRACTOR SHALL COMPLY WITH COLORADO REVISED STATUTES (CRS) 2018, TITLE 9, ARTICLE 1.5–103 (10), "All NEW UNDERGROUND FACILITIES, INCLUDING LATERALS UP TO THE STRUCTURE OR BUILDING BEING SERVED, INSTALLED ON OR AFTER 8/8/2018, MUST BE ELECTRONICALLY LOCATABLE WHEN INSTALLED."

8. PROJECT SPECIFIC NOTES:

   8.1 UTILITY FIELD INVESTIGATION WAS PERFORMED PER THE FOLLOWING DATES/WEATHER: SEPTEMBER 21,22,23, 2020 WITH WARM TEMPERATURES IN THE 70s–80s DEGREES FAHRENHEIT WITH DRY GROUND CONDITIONS. THE UTILITY TEST HOLE INVESTIGATION WAS PERFORMED BY APEIRON UTILITY CONSTRUCTION ON THE SAME DATES, AS ALSO NOTED IN THE UTILITY TEST HOLE TABLE. EXISTING UTILITY CONDITIONS MAY HAVE CHANGED AFTER THESE DATES.

   8.2 UTILITY INVESTIGATION EQUIPMENT UTILIZED AS FOLLOWS: VIVAX–METROTECH VLOC3–5000, JAMESON TRACEABLE FIBERGLASS PUSHROD

   8.3 UTILITY FIELD INFORMATION WAS RECORDED BY THE CITY OF GRAND JUNCTION SURVEY STAFF, AND PROVIDED BY THE CITY OF GRAND JUNCTION CAD STAFF. REFER TO CITY OF GRAND JUNCTION SURVEY SHEET FOR SURVEY DATUM DETAILS.

   8.4 THE PRIMARY SCOPE OF THIS PROJECT IS THE REMOVAL OF THE EXISTING NORTH LEACH CREEK BRIDGE STRUCTURE (SHOWN ON UTILITY PLAN 02) CROSSING G ROAD, AND INSTALLATION OF A NEW STRUCTURE (NOT SHOWN IN THESE UTILITY PLAN SHEETS) RELATED TO REALIGNING NORTH LEACH CREEK AND INCORPORATING AN UNDERGROUND PEDESTRIAN TUNNEL INTO THIS STRUCTURE. THIS WORK IS ULTIMATELY IN PREPARATION FOR THE INSTALLATION OF A ROUNDABOUT AT THE 24 ROAD AND G ROAD INTERSECTION. THE CITY OF GRAND JUNCTION STAFF INITIATED THE FOLLOWING UTILITY RELOCATION ALIGNMENTS IMPACTED BY THE PROPOSED CREEK AND PEDESTRIAN STRUCTURE: UNDERGROUND CENTURYLINK TELEPHONE, OVERHEAD CHARTER FIBER OPTIC TO UNDERGROUND, UNDERGROUND CITY OF GRAND JUNCTION SANITARY AND STORM, OVERHEAD GRAND VALLEY POWER TO UNDERGROUND, UNDERGROUND UTE WATER, UNDERGROUND XCEL ENERGY PRIMARY ELECTRIC, UNDERGROUND XCEL ENERGY 2" DIAMETER POUNDS MEDIUM (PM) PRESSURE GAS, AND XCEL ENERGY 6" DIAMETER INTERMEDIATE PRESSURE (IP) GAS.

   8.5 PROPOSED UTILITY ALIGNMENTS WERE PROVIDED BY THE CITY OF GRAND JUNCTION ON DECEMBER 7, 2020, AND ARE FOR REFERENCE ONLY. CONTRACTOR TO CONFIRM PROPOSED ALIGNMENTS FROM MOST RECENT DESIGN DOCUMENTS. THESE PROPOSED UTILITY LINES WILL BE INSTALLED BY OTHERS.

   8.6 UTILITY LINES THAT WERE UNABLE TO ACHIEVE QLB AS FOLLOWS: GENERALLY ALL OF THOSE BEYOND THE STRUCTURE SCOPE AREA, AND THE 24 ROAD AND G ROAD INTERSECTION SCOPE AREA, WHICH WERE INCORPORATED AS RECORDS FROM THE CITY OF GRAND JUNCTION; ALL SANITARY AND STORM LINES ARE NOTED AS QLC OR QLD FROM THE CITY OF GRAND JUNCTION'S DATA, AND IT IS ASSUMED THAT THE SANITARY PIPE SEGMENTS ARE STRAIGHT FROM MANHOLE TO MANHOLE.

   8.7 THE OVERHEAD ELECTRIC LINES ON G ROAD, EAST OF 24 ROAD CONSIST OF GRAND VALLEY POWER ELECTRIC AND CHARTER COMMUNICATIONS.

   8.8 THE ABANDONED 2–INCH UTE WATER CONSERVANCY DISTRICT WATER LINE IS SHOWN PER AS–BUILT RECORDS, BUT COULD NOT BE FOUND DURING THE UTILITY TEST HOLE INVESTIGATION.

   8.9 UNITE PRIVATE NETWORKS FACILITIES ARE NOT SHOWN ON THE PLAN SHEETS BECAUSE THEY ARE OUTSIDE OF THE NORTH LEACH CREEK STRUCTURE PROJECT LIMITS. HOWEVER, THEY ARE LOCATED ON THE NORTHWEST QUADRANT OF THE 24 ROAD AND G ROAD INTERSECTION, AND WERE LISTED ON THE UNCC 811 SUE TICKET AS A RESPECTIVE UTILITY MEMBER.

   8.10 GRAND VALLEY DRAINAGE DISTRICT ARE NOT SHOWN ON THE PLAN SHEETS BECAUSE THEY ARE OUTSIDE OF THE NORTH LEACH CREEK STRUCTURE PROJECT LIMITS. HOWEVER, THEY ARE LOCATED IN PROXIMITY TO THE PROJECT, AND WERE LISTED ON THE UNCC 811 SUE TICKET AS A RESPECTIVE UTILITY MEMBER.

COLORADO REVISED STATUTES (CRS) 2018 TITLE 9–1.5–102 SUBSURFACE UTILITY ENGINEERING (SUE) REQUIRED PROJECT COMPLIANCE CHECKLIST

1	9–1.5–102–6.8.A	PROJECT INVOLVES CONSTRUCTION CONTRACT WITH A PUBLIC ENTITY	■	YES, PUBLIC		NO, PRIVATE
2	9–1.5–102–6.8.B	PROJECT INVOLVES PRIMARILY HORIZONTAL CONSTRUCTION AND DOES NOT INVOLVE PRIMARILY THE CONSTRUCTION OF BUILDINGS	■	YES, HORIZONTAL		NO, VERTICAL
3A	9–1.5–102–6.8.C.I.A	EXCAVATION FOOTPRINT EXCEEDS 2–FEET DEPTH AND IS A CONTIGUOUS 1,000–SQUARE FEET; OR	■	YES, EXCEEDS		NO, LESS THAN
3B	9–1.5–102–6.8.C.I.B	INVOLVES UTILITY BORING		YES, BORING	■	NO BORING
4	9–1.5–102–6.8.D	PROJECT REQUIRES THE DESIGN SERVICES OF A LICENSED PROFESSIONAL ENGINEER (P.E.)	■	YES, P.E. NEEDED		NO P.E. NEEDED
SUMMARY	9–1.5–103–2.4	REQUIRED TO MEET OR EXCEED THE ASCE 38 STANDARD?	■	YES, ASCE 38 STD.		NO ASCE 38 STD.

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY KJS DATE DEC 2020
DESIGNED BY KJS DATE DEC 2020
CHECKED BY SK DATE DEC 2020
APPROVED BY RB DATE DEC 2020

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PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.SGM: 2020–385.001

G ROAD BRIDGE REPLACEMENT
EXISTING UTILITY NOTES

U01
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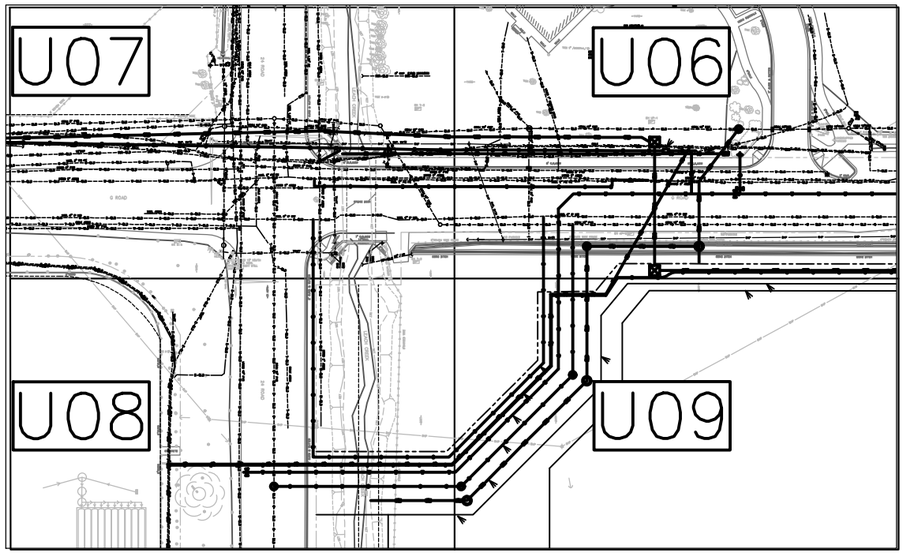
CONTACT LIST OF UTILITY OWNERS WITHIN VICINITY OF PROJECT LIMITS

ORGANIZATION NAME	ABBREVIATION	UTILITY TYPE	CONTACT NAME	CONTACT PHONE	CONTACT EMAIL	RECORDS RECEIVED
CENTURYLINK (AKA LUMEN)	CNLK	TELEPHONE	CHRIS JOHNSON	(970) 244-4311	CHRIS.JOHNSON5@CENTURYLINK.COM	YES
CHARTER – GRAND JUNCTION	CHTR	FIBER OPTIC	MARK KOSTELECKY	(970) 623-9415	MARK.KOSTELECKY@CHARTER.COM	YES
CITY OF GRAND JUNCTION	COGJ	SANITARY, STORM, TRAFFIC SIGNAL, WATER	LEE COOPER	(970) 256-4155	LEEC@GJCITY.ORG	YES
GRAND VALLEY DRAINAGE DISTRICT	GVDD	STORM	STEVE THOMAS	(970) 242-4343; 1005	STEVE.SURVEY@GVDD.ORG	YES
GRAND VALLEY IRRIGATION DISTRICT	GVIC	IRRIGATION	PHIL BERTRAND	(970) 242-2762	CHARLIEG@SPRYNET.COM	NO
GRAND VALLEY POWER	GVP	ELECTRIC	PERRY RUPP	(970) 623-8571	PRUPP@GVP.ORG	YES
UNITE PRIVATE NETWORKS	UPN	FIBER OPTIC	BRYAN FOSTER	(816) 903-9400	BRYAN.FOSTER@UPNFIBER.COM	YES
UTE WATER CONSERVANCY DISTRICT	UWCD	WATER	DAVID PRISKE	(970) 242-7491	DPRISKE@UTEWATER.ORG	YES
XCEL ENERGY	XCEL	ELECTRIC DISTRIBUTION, GAS DISTRIBUTION	BRENDA BOES	(970) 260-6177	BRENDA.K.BOES@XCELENERGY.COM	YES
XCEL ENERGY	XCEL	GAS TRANSMISSION	DUANE PURCELL	(970) 244-2715	DUANE.PURCELL@XCELENERGY.COM	YES

EXISTING UTILITY SHEET INDEX



ABBREVIATIONS

ABDN	ABANDONED
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
BOP	BOTTOM OF PIPE
C	CABLE TELEVISION
CHTR	CHARTER– GRAND JUNCTION
CMP	CORRUGATED METAL PIPE
CNLK	CENTURYLINK (AKA LUMEN)
COGJ	CITY OF GRAND JUNCTION
DNE	DOES NOT EXIST
DNF	DID NOT FIND
E	ELECTRIC
ESMT	EASEMENT
EX	EXISTING
FO	FIBER OPTIC
G	GAS
GVDD	GRAND VALLEY DRAINAGE DISTRICT
GVP	GRAND VALLEY POWER
IP	INTERMEDIATE PRESSURE (XCEL ENERGY)
IRR	IRRIGATION
MH	MANHOLE
MW	MILL WRAPPED STEEL
N/A	NOT AVAILABLE
OHP	OVERHEAD POWER
PE	POLYETHYLENE
PM	POUNDS MEDIUM PRESSURE (XCEL ENERGY)
PVC	POLYVINYL CHLORIDE (PLASTIC)
QL	QUALITY LEVEL
QLA	QUALITY LEVEL A
QLB	QUALITY LEVEL B
QLC	QUALITY LEVEL C
QLD	QUALITY LEVEL D
RCP	REINFORCED CONCRETE PIPE
SAN	SANITARY
STM	STORM
SUE	SUBSURFACE UTILITY ENGINEERING
T	TELEPHONE
TH	TEST HOLE
TOP	TOP OF PIPE
TRAFF	TRAFFIC
UPN	UNITE PRIVATE NETWORKS
UWCD	UTE WATER CONSERVANCY DISTRICT
W	WATER
XCEL	XCEL ENERGY

LINE TYPE LEGEND

- C-QLB, C-QLC, C-QLD — EXISTING CABLE TELEVISION
- F-QLB, F-QLC, F-QLD — EXISTING FIBER OPTIC
- T-QLB, T-QLC, T-QLD — EXISTING TELEPHONE
- E-QLB, E-QLC, E-QLD — EXISTING ELECTRIC
- G-QLB, G-QLC, G-QLD — EXISTING GAS
- IRR-QLB, IRR-QLC, IRR-QLD — EXISTING IRRIGATION
- NP-QLB, NP-QLC, NP-QLD — EXISTING NONPOTABLE WATER
- QLB, QLC, QLD — EXISTING SANITARY
- QLB, QLC, QLD — EXISTING STORM
- W-QLB, W-QLC, W-QLD — EXISTING WATER

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G ROAD BRIDGE REPLACEMENT
UTILITY CONTACTS, LEGENDS, ABBREVIATIONS

U02
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TEST HOLE TABLE REPRESENTING "QUALITY LEVEL A" DATA				PROJECT:	NORTH LEACH CREEK BRIDGE			DATE:	9/21 - 9/23/2020										
TH #	UTILITY OWNER	UTILITY TYPE	GENERAL LOCATION DESCRIPTION (ALL DISTANCES ARE APPROXIMATE)	QUANTITY (EACH)	SIZE (IN)	MATERIAL	UNDERGROUND ALIGNMENT	GROUND CONDITION	EASTING	NORTHING	GROUND ELEV (FT)	DEPTH TO TOP (FT)	DEPTH TO BOP (FT)	DEPTH TO TOP (IN)	DEPTH TO BOP (IN)	TOP ELEV (FT)	BOP ELEV (FT)	DATE PERFORMED	COMMENTS
01	CENTURYLINK	TELEPHONE	NORTH SIDE OF G ROAD, WEST SIDE OF PARK ROADWAY ENTRANCE; 8' NORTH OF SIDEWALK	2	4	GRAY/WHITE PLASTIC PVC	EAST-WEST	GRASS	79136.42	50045.65	4566.74	2.25	2.58	27.0	31.0	4564.49	4564.16	9/21/2020	CONDUITS ARE CONFIGURED SIDE BY SIDE
02	XCEL ENERGY	ELECTRIC (PRIMARY)	NORTH SIDE OF G ROAD, WEST SIDE OF PARK ROADWAY ENTRANCE; 2' NORTH OF SIDEWALK	1	4	BLACK W/ RED STRIPE PLASTIC PVC	EAST-WEST	GRASS	79135.99	50039.99	4566.73	4.00	4.33	48.0	52.0	4562.73	4562.40	9/21/2020	RED TRACER WIRE OBSERVED ALONG SOUTH SIDE OF CONDUIT
03	UTE WATER CONSERVANCY DISTRICT	WATER	NORTH SIDE OF G ROAD, WEST SIDE OF PARK ROADWAY ENTRANCE; 1.5' SOUTH OF EDGE OF ASPHALT	1	8	BLUE-GREEN C900 PLASTIC	EAST-WEST	ASPHALT	79137.02	50028.45	4566.36	3.50	4.17	42.0	50.0	4562.86	4562.19	9/21/2020	BLACK TRACER WIRE OBSERVED ON TOP OF PIPE; C900 MATERIAL BASED ON RECORDS DOCUMENTS
04	XCEL ENERGY	GAS (PM)	NORTH SIDE OF G ROAD, WEST SIDE OF PARK ROADWAY ENTRANCE; 9' SOUTH OF EDGE OF ASPHALT	1	2	ORANGE PLASTIC	EAST-WEST	ASPHALT	79135.77	50021.09	4566.42	2.13	2.29	25.5	27.5	4564.30	4564.13	9/21/2020	NONE
05	UTE WATER CONSERVANCY DISTRICT	WATER	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	ABANDONED 2" PVC WATER LINE PER RECORD DOCUMENTS; REFER TO TH #16
06	XCEL ENERGY	GAS (IP)	SOUTH SIDE OF G ROAD, WEST SIDE OF PARK ROADWAY ENTRANCE; 10' NORTH OF EDGE OF ASPHALT	1	6	BLACK COATED STEEL	EAST-WEST	ASPHALT	79137.18	49995.91	4566.59	4.42	4.92	53.0	59.0	4562.17	4561.67	9/22/2020	SITE WISE STANDBY, PAT MORRICK, ARRIVED ON 9/22/2020 FOR INSPECTION OF THIE PIPE
07	XCEL ENERGY	ELECTRIC (PRIMARY)	NORTH SIDE OF G ROAD, WEST SIDE OF PARK ROADWAY ENTRANCE; 3.5' NORTH OF SIDEWALK	1	4	BLACK W/ RED STRIPE PLASTIC PVC	EAST-WEST	GRASS	79161.47	50041.29	4566.78	4.92	5.25	59.0	63.0	4561.86	4561.53	9/21/2020	NO TRACER WIRE OBSERVED, BUT IT COULD POSSIBLY BE UNDER THE CONDUIT
08	CENTURYLINK	TELEPHONE	NORTH SIDE OF G ROAD, WEST SIDE OF PARK ROADWAY ENTRANCE; 7.5' NORTH OF SIDEWALK	2	4	GRAY/WHITE PLASTIC PVC	EAST-WEST	GRASS	79186.44	50045.05	4566.94	2.33	2.67	28.0	32.0	4564.61	4564.27	9/21/2020	CONDUITS ARE CONFIGURED SIDE BY SIDE; ALSO OBSERVED 2 EACH 1" WHITE IRRIGATION CONDUITS CROSSING SIDE BY SIDE AT 20" TOP IN THE SAME HOLE
08.1	XCEL ENERGY	ELECTRIC (PRIMARY)	NORTH SIDE OF G ROAD, WEST SIDE OF PARK ROADWAY ENTRANCE; 6' NORTH OF SIDEWALK	1	4	BLACK W/ RED STRIPE PLASTIC PVC	EAST-WEST	GRASS	79186.04	50043.88	4566.97	7.75	8.08	93.0	97.0	4559.22	4558.89	9/21/2020	NO TRACER WIRE OBSERVED, BUT IT COULD POSSIBLY BE UNDER THE CONDUIT
09	CENTURYLINK	TELEPHONE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	ORIGINALLY IN TEST HOLE PLAN, BUT 2 EACH CENTURYLINK LINES RUN TOGETHER IN THE SAME TRENCH IN TH #08; LOCATE EQUIPMENT DID NOT PROVIDE A SIGNAL OF STRONG CERTAINTY AT TH #09
10	UTE WATER CONSERVANCY DISTRICT	WATER	NORTH SIDE OF G ROAD, WEST SIDE OF PARK ROADWAY ENTRANCE; 2' SOUTH OF EDGE OF ASPHALT	1	8	BLUE-GREEN C900 PLASTIC	EAST-WEST	ASPHALT	79172.31	50027.92	4566.54	3.46	4.13	41.5	49.5	4563.08	4562.42	9/21/2020	BLACK TRACER WIRE OBSERVED ON TOP OF PIPE; C900 MATERIAL BASED ON RECORDS DOCUMENTS
11	XCEL ENERGY	GAS (PM)	NORTH SIDE OF G ROAD, WEST SIDE OF PARK ROADWAY ENTRANCE; 8' SOUTH OF EDGE OF ASPHALT	1	2	ORANGE PLASTIC	EAST-WEST	ASPHALT	79168.71	50021.49	4566.58	2.46	2.63	29.5	31.5	4564.12	4563.96	9/21/2020	RED TRACER WIRE OBSERVED ALONG THE CONDUIT
12	UTE WATER CONSERVANCY DISTRICT	WATER	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	ABANDONED 2" PVC WATER LINE PER RECORD DOCUMENTS; REFER TO TH #16
13	XCEL ENERGY	GAS (IP)	SOUTH SIDE OF G ROAD, WEST SIDE OF PARK ROADWAY ENTRANCE; 10.5' NORTH OF EDGE OF ASPHALT	1	6	BLACK COATED STEEL	EAST-WEST	ASPHALT	79168.59	49995.98	4566.69	4.42	4.92	53.0	59.0	4562.27	4561.77	9/22/2020	SITE WISE STANDBY, PAT MORRICK, ARRIVED ON 9/22/2020 FOR INSPECTION OF THIE PIPE

TEST HOLE TABLE REPRESENTING "QUALITY LEVEL A" DATA				PROJECT:	NORTH LEACH CREEK BRIDGE			DATE:	9/21 - 9/23/2020										
TH #	UTILITY OWNER	UTILITY TYPE	GENERAL LOCATION DESCRIPTION (ALL DISTANCES ARE APPROXIMATE)	QUANTITY (EACH)	SIZE (IN)	MATERIAL	UNDERGROUND ALIGNMENT	GROUND CONDITION	EASTING	NORTHING	GROUND ELEV (FT)	DEPTH TO TOP (FT)	DEPTH TO BOP (FT)	DEPTH TO TOP (IN)	DEPTH TO BOP (IN)	TOP ELEV (FT)	BOP ELEV (FT)	DATE PERFORMED	COMMENTS
14	UTE WATER CONSERVANCY DISTRICT	WATER	NORTH SIDE OF G ROAD, WEST SIDE OF PARK ROADWAY ENTRANCE; 2' SOUTH OF EDGE OF ASPHALT	1	8	BLUE-GREEN C900 PLASTIC	EAST-WEST	ASPHALT	79197.83	50027.77	4566.63	3.79	4.46	45.5	53.5	4562.84	4562.17	9/21/2020	C900 MATERIAL BASED ON RECORDS DOCUMENTS
15	XCEL ENERGY	GAS (PM)	NORTH SIDE OF G ROAD, WEST SIDE OF PARK ROADWAY ENTRANCE; 7' SOUTH OF EDGE OF ASPHALT	1	2	ORANGE PLASTIC	EAST-WEST	ASPHALT	79197.53	50022.69	4566.68	2.58	2.75	31.0	33.0	4564.10	4563.93	9/21/2020	NONE
16	UTE WATER CONSERVANCY DISTRICT	WATER	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	ABANDONED 2" PVC WATER LINE PER RECORD DOCUMENTS; APEIRON UNSUCCESSFULLY EXCAVATED A SLOT TRENCH NORTH-SOUTH AT THIS STAKED LOCATION
17	XCEL ENERGY	GAS (IP)	SOUTH SIDE OF G ROAD, WEST SIDE OF PARK ROADWAY ENTRANCE; 10' NORTH OF EDGE OF ASPHALT	1	6	BLACK COATED STEEL	EAST-WEST	ASPHALT	79069.94	49996.33	4566.38	4.58	5.08	55.0	61.0	4561.80	4561.30	9/22/2020	SITE WISE STANDBY, PAT MORRICK, ARRIVED ON 9/22/2020 FOR INSPECTION OF THIE PIPE
18	XCEL ENERGY	GAS (IP)	SOUTH SIDE OF G ROAD, WEST SIDE OF PARK ROADWAY ENTRANCE; 11' NORTH OF EDGE OF ASPHALT	1	6	BLACK COATED STEEL	EAST-WEST	ASPHALT	79058.97	49996.44	4566.35	4.67	5.17	56.0	62.0	4561.68	4561.18	9/22/2020	SITE WISE STANDBY, PAT MORRICK, ARRIVED ON 9/22/2020 FOR INSPECTION OF THIE PIPE
19	CITY OF GRAND JUNCTION	ELECTRIC (TRAFFIC SIGNAL)	SOUTHEAST CORNER OF G ROAD & 24 ROAD INTERSECTION; SOUTH END OF CROSS WALK STRIPES; 3" OFF OF CURB & GUTTER	3	2	GRAY PVC	EAST-WEST	ASPHALT	78891.68	49970.86	4565.99	2.83	3.00	34.0	36.0	4563.16	4562.99	9/22/2020	CONDUITS ARE CONFIGURED SIDE BY SIDE
20	XCEL ENERGY	GAS (IP)	SOUTH SIDE OF G ROAD, EAST SIDE OF 24 ROAD; 18' NORTH OF EDGE OF ASPHALT	1	6	BLACK COATED STEEL	EAST-WEST	ASPHALT	78896.84	49994.02	4566.25	3.00	3.50	36.0	42.0	4563.25	4562.75	9/22/2020	SITE WISE STANDBY, PAT MORRICK, ARRIVED ON 9/22/2020 FOR INSPECTION OF THIE PIPE
21	XCEL ENERGY	GAS (PM)	NORTH SIDE OF G ROAD, EAST SIDE OF 24 ROAD; 14.5' SOUTH OF EDGE OF ASPHALT	1	2	ORANGE PLASTIC	EAST-WEST	ASPHALT	78897.94	50022.73	4566.34	3.96	4.13	47.5	49.5	4562.38	4562.22	9/22/2020	NONE
22	XCEL ENERGY	GAS (PM)	NORTH SIDE OF G ROAD, EAST SIDE OF 24 ROAD; 15' WEST OF EDGE OF ASPHALT	1	1.5	YELLOW PLASTIC	NORTH-SOUTH	ASPHALT	78877.29	50042.63	4566.65	3.83	3.96	46.0	47.5	4562.82	4562.69	9/22/2020	NONE
23	XCEL ENERGY	GAS (PM)	NORTH SIDE OF G ROAD, WEST SIDE OF 24 ROAD; 11' SOUTH OF EDGE OF ASPHALT	1, 1	1, 1	YELLOW PLASTIC, ORANGE PLASTIC	EAST-WEST, EAST-WEST	ASPHALT	78819.40	50021.88	4566.05	3.00, 3.38	3.17, 3.54	36, 40.5	38, 42.5	4563.05, 4562.67	4562.88, 4562.51	9/23/2020	PIPES ARE CONFIGURED SIDE BY SIDE
24	XCEL ENERGY	GAS (PM)	NORTH SIDE OF G ROAD, WEST SIDE OF 24 ROAD; 4.5' NORTH OF EDGE OF ASPHALT	1	2	YELLOW PLASTIC	EAST-WEST	GRAVELLY DIRT ON RDWY SHLDR	78804.40	50034.99	4565.56	3.25	3.42	39.0	41.0	4562.31	4562.15	9/23/2020	SQUARE GEOGRID PLASTIC MATERIAL ENCOUNTERED IN THE HOLE
25	UTE WATER CONSERVANCY DISTRICT	WATER	SOUTH SIDE OF G ROAD, WEST SIDE OF 24 ROAD; 1.5' WEST OF EDGE OF ASPHALT	1	10	BLUE-GREEN C900 PLASTIC	NORTH-SOUTH	GRAVELLY DIRT ON RDWY SHLDR	78843.75	49821.60	4564.66	5.42	6.25	65.0	75.0	4559.25	4558.41	9/22/2020	BLACK TRACER WIRE OBSERVED ON TOP OF PIPE; C900 MATERIAL BASED ON RECORDS DOCUMENTS
26	UTE WATER CONSERVANCY DISTRICT	WATER (SERVICE TO PAVILION FOUNTAIN)	NORTH SIDE OF G ROAD, WEST SIDE OF PARK ROADWAY ENTRANCE; 21' NORTH OF CENTER OF WATER METER	1	1	BLACK COPPER	NORTH-SOUTH	GRASS	79066.65	50061.20	4566.40	3.67	3.75	44.0	45.0	4562.73	4562.65	9/23/2020	WATER SERVICE LINE RUNS FROM THE METER TO THE FOUNTAIN ON THE SOUTH SIDE OF THE PARK PAVILION STRUCTURE

TRACER WIRE SPECIFICATIONS

1. PER COLORADO LAW, ALL NEW UNDERGROUND FACILITIES (UTILITIES), INCLUDING LATERALS OR SERVICES UP TO THE BUILDING BEING SERVED, SHALL BE ELECTRONICALLY LOCATABLE WHEN INSTALLED. ALL NON-ENERGIZED UTILITIES SHALL HAVE TRACER WIRE PROPERLY INSTALLED WITH THE UTILITY. (UNLESS THE UTILITY IS METALLIC AND SPECIFICALLY DESIGNED TO BE LOCATED THROUGH THE PIPE MATERIAL.)

2. TRACER WIRE
   - 2.1. OPEN TRENCH INSTALLATIONS – TRACER WIRE SHALL BE #12 AWG COPPER CLAD STEEL, HIGH STRENGTH WITH MINIMUM 450 LB. BREAK LOAD, OR SOLID CU, AND WITH MINIMUM 30 MIL HDPE INSULATION THICKNESS.
   - 2.2. DIRECTIONAL DRILLING/BORING OPEN TRENCH INSTALLATIONS – TRACER WIRE SHALL BE #12 AWG COPPER CLAD STEEL, EXTRA HIGH STRENGTH WITH MINIMUM 1,150 LB. BREAK LOAD, WITH MINIMUM 30 MIL HDPE INSULATION THICKNESS.
   - 2.3. PIPE BURSTING/SLIP LINING – TRACER WIRE SHALL BE 7 X 7 STRANDED COPPER CLAD STEEL, EXTREME STRENGTH WITH 4,700 LB. BREAK LOAD, WITH MINIMUM 50 ML HDPE INSULATION THICKNESS

3. CONNECTORS
   - 3.1. ALL MAINLINE TRACER WIRES MUST BE INTERCONNECTED IN INTERSECTIONS, AT MAINLINE TEES AND MAINLINE CROSSES. AT TEES, THE THREE WIRES SHALL BE JOINED USING A SINGLE 3-WAY LOCKABLE CONNECTOR (SNAKEBITETM OR APPROVED EQUAL). AT CROSSES, THE FOUR WIRES SHALL BE JOINED USING A 4-WAY CONNECTOR. USE OF TWO 3-WAY CONNECTORS WITH A SHORT JUMPER WIRE BETWEEN THEM IS AN ACCEPTABLE ALTERNATIVE.
   - 3.2. DIRECT BURY WIRE CONNECTORS – SHALL INCLUDE SNAKEBITETM 3-WAY LOCKABLE CONNECTORS (OR APPROVED EQUAL) AND MAINLINE TO LATERAL LUG CONNECTORS SPECIFICALLY MANUFACTURED FOR USE IN UNDERGROUND TRACER WIRE INSTALLATION. CONNECTORS SHALL BE DIELECTRIC SILICON FILLED TO SEAL OUT MOISTURE AND CORROSION AND SHALL BE INSTALLED IN A MANNER SO AS TO PREVENT ANY UNINSULATED WIRE EXPOSURE.
   - 3.3. NON-LOCKING FRICTION FIT, TWIST ON OR TAPED CONNECTORS ARE PROHIBITED.

4. TERMINATION/ACCESS
   - 4.1. ALL TRACER WIRE TERMINATION POINTS MUST UTILIZE AN APPROVED TRACER WIRE ACCESS BOX (ABOVE GROUND ACCESS BOX OR GRADE LEVEL/IN-GROUND ACCESS BOX AS APPLICABLE), SPECIFICALLY MANUFACTURED FOR THIS PURPOSE.
   - 4.2. ALL GRADE LEVEL/IN-GROUND ACCESS BOXES SHALL INCLUDE A DUAL TERMINAL SWITCHABLE LID (SNAKEPITÐ LD14G2T-SW OR APPROVED EQUAL), BE APPROPRIATELY IDENTIFIED WITH "SEWER" CAST INTO THE CAP, AND COLOR CODED PER APWA STANDARD FOR THE SPECIFIC UTILITY BEING MARKED.
   - 4.3. A MINIMUM OF 2 FT. OF EXCESS/SLACK WIRE IS REQUIRED IN ALL TRACER WIRE ACCESS BOXES AFTER MEETING FINAL ELEVATION.
   - 4.4. ALL TRACER WIRE ACCESS BOXES MUST INCLUDE A MANUALLY INTERRUPTIBLE CONDUCTIVE/CONNECTIVE LINK BETWEEN THE TERMINAL(S) FOR THE TRACER WIRE CONNECTION AND THE TERMINAL FOR THE GROUND ROD WIRE CONNECTION.
   - 4.5. GROUND WIRE SHALL BE CONNECTED TO THE IDENTIFIED (OR BOTTOM) TERMINAL ON ALL ACCESS BOXES.
   - 4.6. LONG-RUNS, IN EXCESS OF 2,500 LINEAR FEET – TRACER WIRE ACCESS MUST BE PROVIDED UTILIZING AN APPROVED GRADE LEVEL/IN-GROUND TRACER WIRE ACCESS BOX, LOCATED AT THE EDGE OF THE ROAD RIGHT-OF-WAY AND OUT OF THE ROADWAY. THE GRADE LEVEL/IN-GROUND TRACER WIRE ACCESS BOX SHALL BE DELINEATED USING A MINIMUM 48" POLYETHYLENE MARKER POST, COLOR CODED PER APWA STANDARD FOR THE SPECIFIC UTILITY BEING MARKED OR OTHER APPROVED MARKER BY THE CITY OF PUEBLO. GROUNDING

5. GROUNDING
   - 5.1. TRACER WIRE MUST BE PROPERLY GROUNDED AT ALL DEAD ENDS/STUBS.
   - 5.2. GROUNDING OF TRACER WIRE SHALL BE ACHIEVED BY USE OF A DRIVE-IN MAGNESIUM GROUND ROD WITH A MINIMUM OF 20FT OF #12 RED HDPE INSULATED COPPER CLAD STEEL WIRE CONNECTED TO ANODE (MINIMUM 1.5 LB.) SPECIFICALLY MANUFACTURED FOR THIS PURPOSE AND BURIED AT THE SAME ELEVATION AS THE UTILITY.
   - 5.3. WHEN GROUNDING THE TRACER WIRE AT DEAD ENDS/STUBS, THE GROUND ROD SHALL BE INSTALLED IN A DIRECTION 180 DEGREES OPPOSITE OF THE TRACER WIRE, AT THE MAXIMUM POSSIBLE DISTANCE.
   - 5.4. WHEN GROUNDING THE TRACER WIRE IN AREAS WHERE THE TRACER WIRE IS CONTINUOUS AND NEITHER THE MAINLINE TRACER WIRE OR THE GROUND ROD WIRE WILL BE TERMINATED AT/ABOVE GRADE, INSTALL GROUND ROD WIRE DIRECTLY BENEATH AND IN-LINE WITH THE TRACER WIRE. DO NOT COIL EXCESS WIRE FROM GROUND ROD WIRE. IN THIS INSTALLATION METHOD, THE GROUND ROD WIRE SHALL BE TRIMMED TO AN APPROPRIATE LENGTH BEFORE CONNECTING TO TRACER WIRE WITH A MAINLINE TO LATERAL LUG CONNECTOR.
   - 5.5. WHERE THE GROUND ROD WIRE WILL BE CONNECTED TO A TRACER WIRE ACCESS BOX, A MINIMUM OF 2 FT. OF EXCESS/SLACK WIRE IS REQUIRED AFTER MEETING FINAL ELEVATION.

6. INSTALLATION
   - 6.1. TRACER WIRE SYSTEMS MUST BE INSTALLED AS A SINGLE CONTINUOUS WIRE, EXCEPT WHERE USING APPROVED CONNECTORS. NO LOOPING OR COILING OF WIRE IS ALLOWED.
   - 6.2. ANY DAMAGE OCCURRING DURING INSTALLATION OF THE TRACER WIRE MUST BE IMMEDIATELY REPAIRED BY REMOVING THE DAMAGED WIRE AND INSTALLING A NEW SECTION OF WIRE WITH APPROVED CONNECTORS. TAPING AND/OR SPRAY COATING SHALL NOT BE ALLOWED.
   - 6.3. TRACER WIRE SHALL BE INSTALLED AT THE TOP OF THE PIPE AND SECURED (TAPED/TIED) AT 5' INTERVALS
   - 6.4. MAINLINE TRACER WIRE SHALL NOT BE CONNECTED TO EXISTING CONDUCTIVE PIPES. TREAT AS A MAINLINE DEAD-END AND GROUND USING AN APPROVED WATERPROOF CONNECTION TO A GROUND ROD BURIED AT THE SAME DEPTH AS THE TRACER WIRE.
   - 6.5. ALL SERVICE LATERAL TRACER WIRES SHALL BE A SINGLE WIRE, CONNECTED TO THE MAINLINE TRACER WIRE USING AN APPROVED MAINLINE TO LATERAL LUG CONNECTOR, INSTALLED WITHOUT CUTTING/SPLICING THE MAINLINE TRACER WIRE.
   - 6.6. IN OCCURRENCES WHERE AN EXISTING TRACER WIRE IS ENCOUNTERED ON AN EXISTING UTILITY THAT IS BEING EXTENDED OR TIED INTO, THE NEW TRACER WIRE AND EXISTING TRACER WIRE SHALL BE CONNECTED USING APPROVED SPLICE CONNECTORS AND SHALL BE PROPERLY GROUNDED AT THE SPLICE LOCATION AS SPECIFIED.

7. STORM AND SANITARY SYSTEMS – SEE THE CITY OF GRAND JUNCTION'S SPECIFICATIONS FOR TRACER WIRE REQUIREMENTS OF CITY OWNED UTILITIES.
   - 7.1. ALL SERVICE LATERAL TRACER WIRES MUST BE PROPERLY CONNECTED TO THE MAINLINE TRACER WIRE TO ENSURE FULL TRACING/LOCATING CAPABILITIES FROM A SINGLE CONNECTION POINT.
   - 7.2. LAY MAINLINE TRACER WIRE CONTINUOUSLY, BY-PASSING AROUND THE OUTSIDE OF MANHOLES/STRUCTURES ON THE NORTH OR EAST SIDE.
   - 7.3. TRACER WIRE ON ALL SEWER LATERALS MUST TERMINATE AT THE PROPERTY LINE WITH A COIL OF 6 FEET OF TRACER WIRE TAPED DIRECTLY TO THE SERVICE LATERAL AT THE EDGE OF THE ROAD RIGHT-OF-WAY OR AT AN APPROVED LOCATION.

8. WATER SYSTEMS – SEE THE UTE WATER CONSERVANCY DISTRICT SPECIFICATIONS FOR TRACER WIRE REQUIREMENTS OF UTE WATER CONSERVANCY DISTRICT FACILITIES.
   - 8.1. A MAINLINE TRACER WIRE MUST BE INSTALLED, WITH ALL SERVICE LATERAL TRACER WIRES PROPERLY CONNECTED TO THE MAINLINE TRACER WIRE, TO PROMOTE TRACING/LOCATING CAPABILITIES FROM A SINGLE CONNECTION POINT.
   - 8.2. LAY MAINLINE TRACER WIRE CONTINUOUSLY, BY-PASSING AROUND THE OUTSIDE OF VALVES AND FITTINGS ON THE NORTH OR EAST SIDE.
   - 8.3. A SINGLE TRACER WIRE ONLY SHALL BE INSTALLED ON ALL WATER SERVICE LATERALS AND MUST TERMINATE AT AN APPROVED TRACER WIRE ACCESS POINT, COLOR CODED BLUE AND LOCATED DIRECTLY ABOVE THE SERVICE LATERAL AT THE EDGE OF ROAD RIGHT-OF-WAY.
   - 8.4. TRACER WIRE ACCESS POINTS WILL BE INSTALLED AT ALL FIRE HYDRANTS.

9. TESTING
   - 9.1. ALL NEW TRACER WIRE INSTALLATIONS SHALL BE LOCATED USING TYPICAL LOW FREQUENCY (512HZ) LINE TRACING EQUIPMENT, WITNESSED BY THE CONTRACTOR, ENGINEER AND FACILITY OWNER AS APPLICABLE, PRIOR TO ACCEPTANCE OF OWNERSHIP.
   - 9.2. CONTINUITY TESTING IN LIEU OF ACTUAL LINE TRACING SHALL NOT BE ACCEPTED.

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY KJS DATE DEC 2020
DESIGNED BY KJS DATE DEC 2020
CHECKED BY SK DATE DEC 2020
APPROVED BY RB DATE DEC 2020

SCALES: PLAN

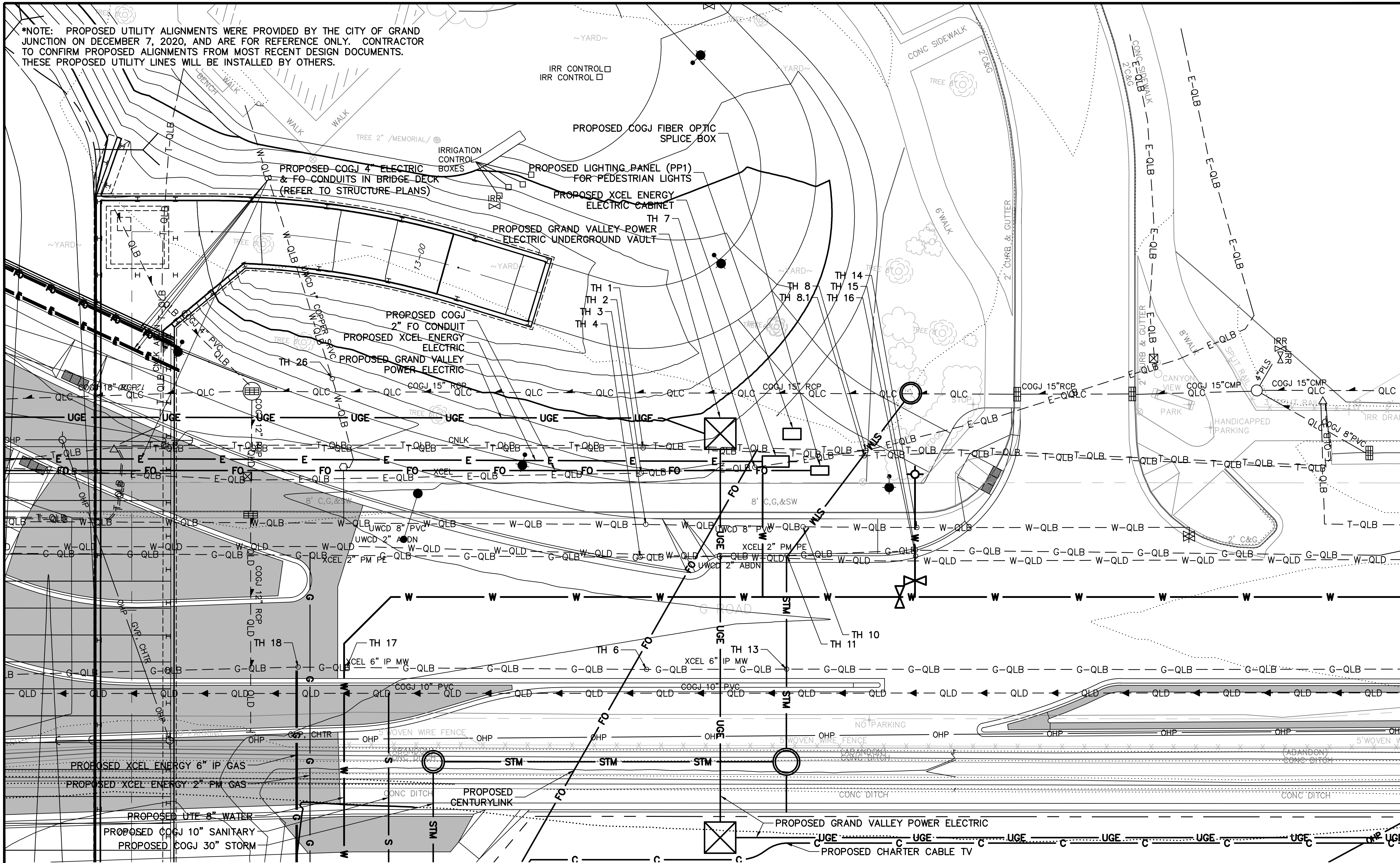
CITY OF Grand Junction COLORADO
SGM 259 Grand Ave, Suite 200 Grand Junction, CO 81501 970.245.2571 www.sgm-inc.com

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.SGM: 2020-385.001

G ROAD BRIDGE REPLACEMENT
TRACER WIRE SPEC

U05
67

*NOTE: PROPOSED UTILITY ALIGNMENTS WERE PROVIDED BY THE CITY OF GRAND JUNCTION ON DECEMBER 7, 2020, AND ARE FOR REFERENCE ONLY. CONTRACTOR TO CONFIRM PROPOSED ALIGNMENTS FROM MOST RECENT DESIGN DOCUMENTS. THESE PROPOSED UTILITY LINES WILL BE INSTALLED BY OTHERS.



PROPOSED COGJ FIBER OPTIC SPLICE BOX
IRRIGATION CONTROL BOXES
PROPOSED COGJ 4" ELECTRIC & FO CONDUITS IN BRIDGE DECK (REFER TO STRUCTURE PLANS)
PROPOSED LIGHTING PANEL (PP1) FOR PEDESTRIAN LIGHTS
PROPOSED XCEL ENERGY ELECTRIC CABINET
PROPOSED GRAND VALLEY POWER ELECTRIC UNDERGROUND VAULT
PROPOSED COGJ 2" FO CONDUIT
PROPOSED XCEL ENERGY ELECTRIC
PROPOSED GRAND VALLEY POWER ELECTRIC
IRR CONTROL
CONC SIDEWALK
2' CURB & GUTTER
8' C,G,&SW
G ROAD
NO PARKING
5' WOVEN WIRE FENCE
CONC DITCH
COGJ 15" RCP
COGJ 18" RCP
COGJ 12" RCP
COGJ 10" PVC
UWCD 8" PVC
UWCD 2" ABDN
XCEL 2" PM PE
XCEL 6" IP MW
HANDICAPPED PARKING
CANYON VIEW PARK
PROPOSED XCEL ENERGY 6" IP GAS
PROPOSED XCEL ENERGY 2" PM GAS
PROPOSED UTE 8" WATER
PROPOSED COGJ 10" SANITARY
PROPOSED COGJ 30" STORM
PROPOSED CENTURYLINK
PROPOSED GRAND VALLEY POWER ELECTRIC
PROPOSED CHARTER CABLE TV

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY KJS DATE DEC 2020
DESIGNED BY KJS DATE DEC 2020
CHECKED BY SK DATE DEC 2020
APPROVED BY RB DATE DEC 2020

SCALES: PLAN 0 5 10 20

CITY OF Grand Junction COLORADO

SGM 259 Grand Ave, Suite 200 Grand Junction, CO 81501 970.245.2571 www.sgm-inc.com

PUBLIC WORKS ENGINEERING DIVISION
PROJECT NO.SGM: 2020-385.001

G ROAD BRIDGE REPLACEMENT
EXISTING UTILITY PLAN 01

U06

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PROPOSED GRAND VALLEY POWER ELECTRIC EXTENDS WEST BEYOND NEXT ELECTRIC POLE

PROPOSED XCEL ENERGY 2" PM GAS

PROPOSED XCEL ENERGY ELECTRIC EXTENDS WEST TO ELECTRIC MANHOLE

PROPOSED COGJ 4" ELECTRIC & FO CONDUITS IN BRIDGE DECK (REFER TO STRUCTURE PLANS)

PROPOSED GRAND VALLEY POWER ELECTRIC

PROPOSED XCEL ENERGY ELECTRIC

PROPOSED COGJ 2" FO CONDUIT

PROPOSED GRAND VALLEY POWER TEMPORARY OVERHEAD ELECTRIC

PROPOSED XCEL ENERGY 2" PM GAS

PROPOSED XCEL ENERGY 6" IP GAS

TH 19

TH 20

TH 21

TH 22

TH 23

TH 24

BRIDGE DECK

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY	KJS	DATE	DEC 2020
DESIGNED BY	KJS	DATE	DEC 2020
CHECKED BY	SK	DATE	DEC 2020
APPROVED BY	RB	DATE	DEC 2020

SCALES: PLAN 0 2.5 5 10

CITY OF Grand Junction COLORADO

SGM
259 Grand Ave, Suite 200
Grand Junction, CO 81501
970.245.2571 www.sgm-inc.com

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.SGM: 2020-385.001

G ROAD BRIDGE REPLACEMENT
EXISTING UTILITY PLAN 02

U07
69

*NOTE: PROPOSED UTILITY ALIGNMENTS WERE PROVIDED BY THE CITY OF GRAND JUNCTION ON DECEMBER 7, 2020, AND ARE FOR REFERENCE ONLY. CONTRACTOR TO CONFIRM PROPOSED ALIGNMENTS FROM MOST RECENT DESIGN DOCUMENTS. THESE PROPOSED UTILITY LINES WILL BE INSTALLED BY OTHERS.

PROPOSED GRAND VALLEY POWER TEMPORARY OVERHEAD ELECTRIC

PROPOSED XCEL ENERGY 2" PM GAS

PROPOSED XCEL ENERGY 6" IP GAS

PROPOSED GRAND VALLEY POWER TEMPORARY OVERHEAD ELECTRIC POLE ANCHOR

PROPOSED COGJ 4" ELECTRIC & FO CONDUITS IN BRIDGE DECK (REFER TO STRUCTURE PLANS)

RIGHT-OF-WAY

PROPOSED CENTURYLINK && CHARTER (JOINT TRENCH)

PROPOSED UTE 8" WATER

PROPOSED CITY OF GRAND JUNCTION 10" SANITARY

PROPOSED CITY OF GRAND JUNCTION 30" STORM

MULTI-PURPOSE EASEMENT

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

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SCALES: PLAN 0 2.5 5 10

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ENGINEERING DIVISION
PROJECT NO.SGM: 2020-385.001

G ROAD BRIDGE REPLACEMENT
EXISTING UTILITY PLAN 03

U08
70

PROPOSED GRAND VALLEY POWER
TEMPORARY OVERHEAD ELECTRIC

PROPOSED COGJ 4" ELECTRIC &
FO CONDUITS IN BRIDGE DECK
(REFER TO STRUCTURE PLANS)

PROPOSED XCEL ENERGY 6" IP GAS

PROPOSED XCEL ENERGY 2" PM GAS,
CENTURYLINK, AND CHARTER IN JOINT TRENCH
(JOINT TRENCH DETAIL SHOWN ON THIS SHEET)

PROPOSED UTE 8" WATER

14' WIDE MULTI-PURPOSE EASEMENT

5' WIDE TEMPORARY CONSTRUCTION EASEMENT

RIGHT-OF-WAY

MULTI-PURPOSE EASEMENT

PROPOSED GRAND VALLEY POWER
TEMPORARY OVERHEAD ELECTRIC
POLE ANCHOR

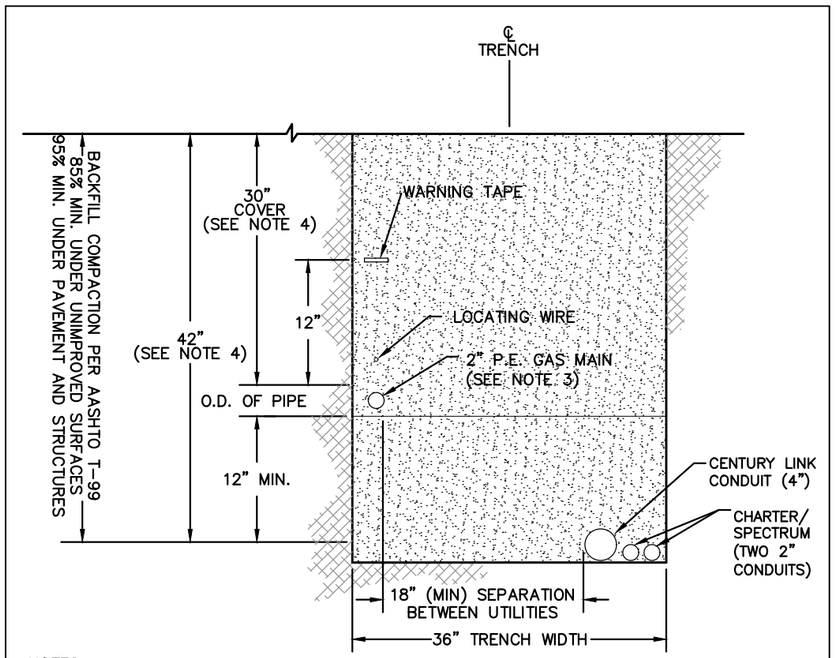
PROPOSED CITY OF GRAND JUNCTION 10" SANITARY

PROPOSED CITY OF GRAND JUNCTION 30" STORM

MULTI-PURPOSE EASEMENT

TEMPORARY CONSTRUCTION EASEMENT

*NOTE: PROPOSED UTILITY ALIGNMENTS WERE PROVIDED BY THE CITY OF GRAND JUNCTION ON DECEMBER 7, 2020, AND ARE FOR REFERENCE ONLY. CONTRACTOR TO CONFIRM PROPOSED ALIGNMENTS FROM MOST RECENT DESIGN DOCUMENTS. THESE PROPOSED UTILITY LINES WILL BE INSTALLED BY OTHERS.



NOTES:

1. FOR EASE OF CONSTRUCTION AND MAINTENANCE, PRIMARY CABLE SHOULD BE 12" TO 24" FROM COMMUNICATION CABLES. HOWEVER, NESC REQUIREMENTS PERMIT "SUPPLY AND COMMUNICATION CABLES TO BE BURIED TOGETHER AT THE SAME DEPTH WITH NO DELIBERATE SEPARATION BETWEEN FACILITIES PROVIDED ALL PARTIES ARE IN AGREEMENT."
2. 36" TRENCH WIDTH SHOULD BE USED.
3. STEEL GAS PIPE OR STEEL DUCT IS NOT ALLOWED FOR JOINT TRENCH CONSTRUCTION.
4. WHERE UNDERGROUND UTILITIES CROSS OR ENCROACH INTO CITY STREETS THEY SHALL BE INSTALLED TO A DEPTH PROVIDING 3' MINIMUM COVER BELOW FINISHED GRADE.

JOINT TRENCH DETAIL
NOT TO SCALE

DESCRIPTION	DATE
REVISION 1	–
REVISION 2	–
REVISION 3	–
REVISION 4	–

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SCALES:
PLAN
0 5 10 20

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ENGINEERING DIVISION
PROJECT NO.SGM: 2020-385.001

G ROAD BRIDGE REPLACEMENT
EXISTING UTILITY PLAN 04

U09
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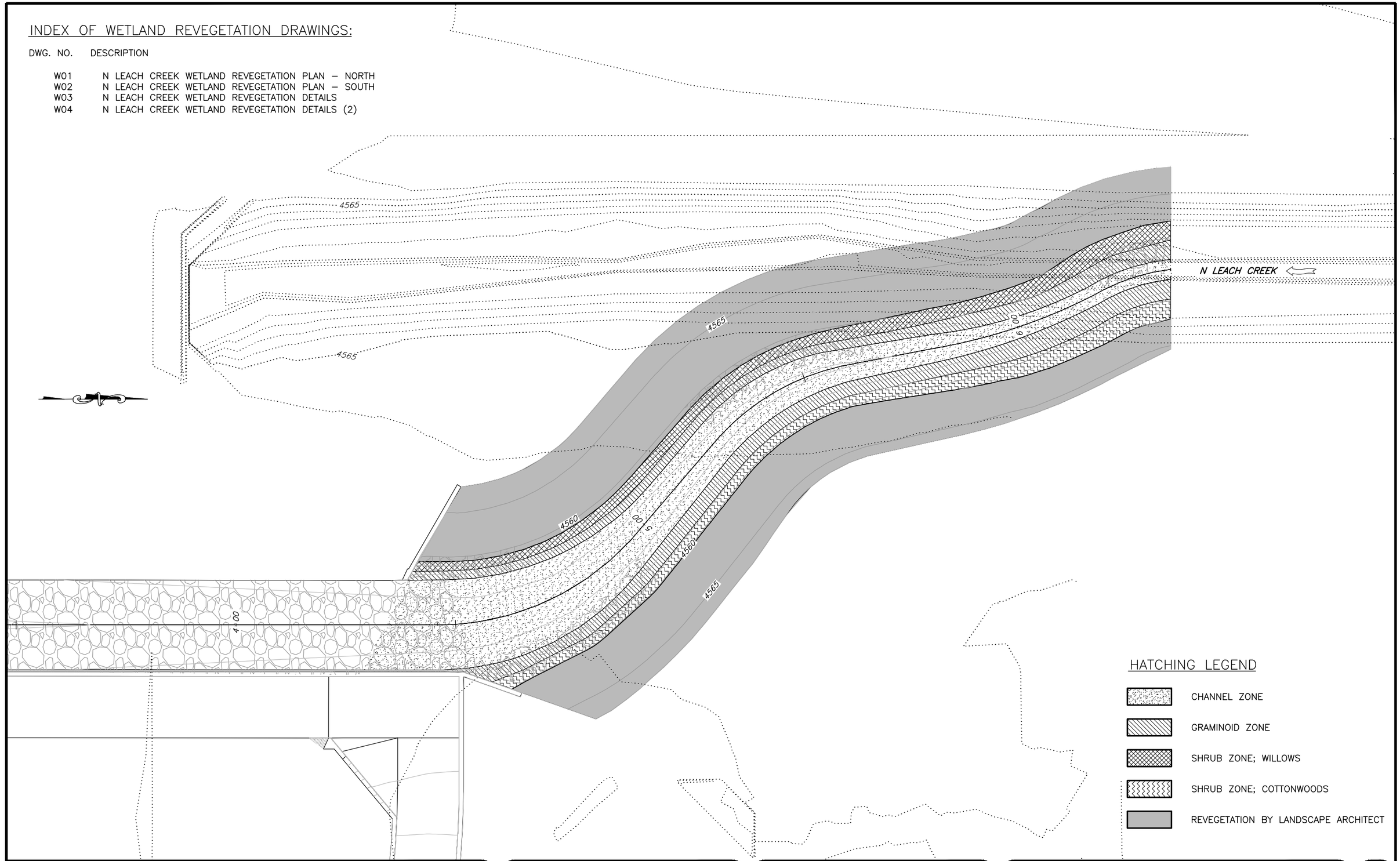
INDEX OF WETLAND REVEGETATION DRAWINGS:

DWG. NO.	DESCRIPTION
W01	N LEACH CREEK WETLAND REVEGETATION PLAN – NORTH
W02	N LEACH CREEK WETLAND REVEGETATION PLAN – SOUTH
W03	N LEACH CREEK WETLAND REVEGETATION DETAILS
W04	N LEACH CREEK WETLAND REVEGETATION DETAILS (2)



HATCHING LEGEND

- CHANNEL ZONE
- GRAMINOID ZONE
- SHRUB ZONE; WILLOWS
- SHRUB ZONE; COTTONWOODS
- REVEGETATION BY LANDSCAPE ARCHITECT

DESCRIPTION	DATE
REVISION 1	–
REVISION 2	–
REVISION 3	–
REVISION 4	–

DRAWN BY CWG DATE 1/2021
DESIGNED BY MCF DATE 1/2021
CHECKED BY MCF DATE 1/2021
APPROVED BY ____ DATE ____

SCALES:
PLAN
0 5 10 20

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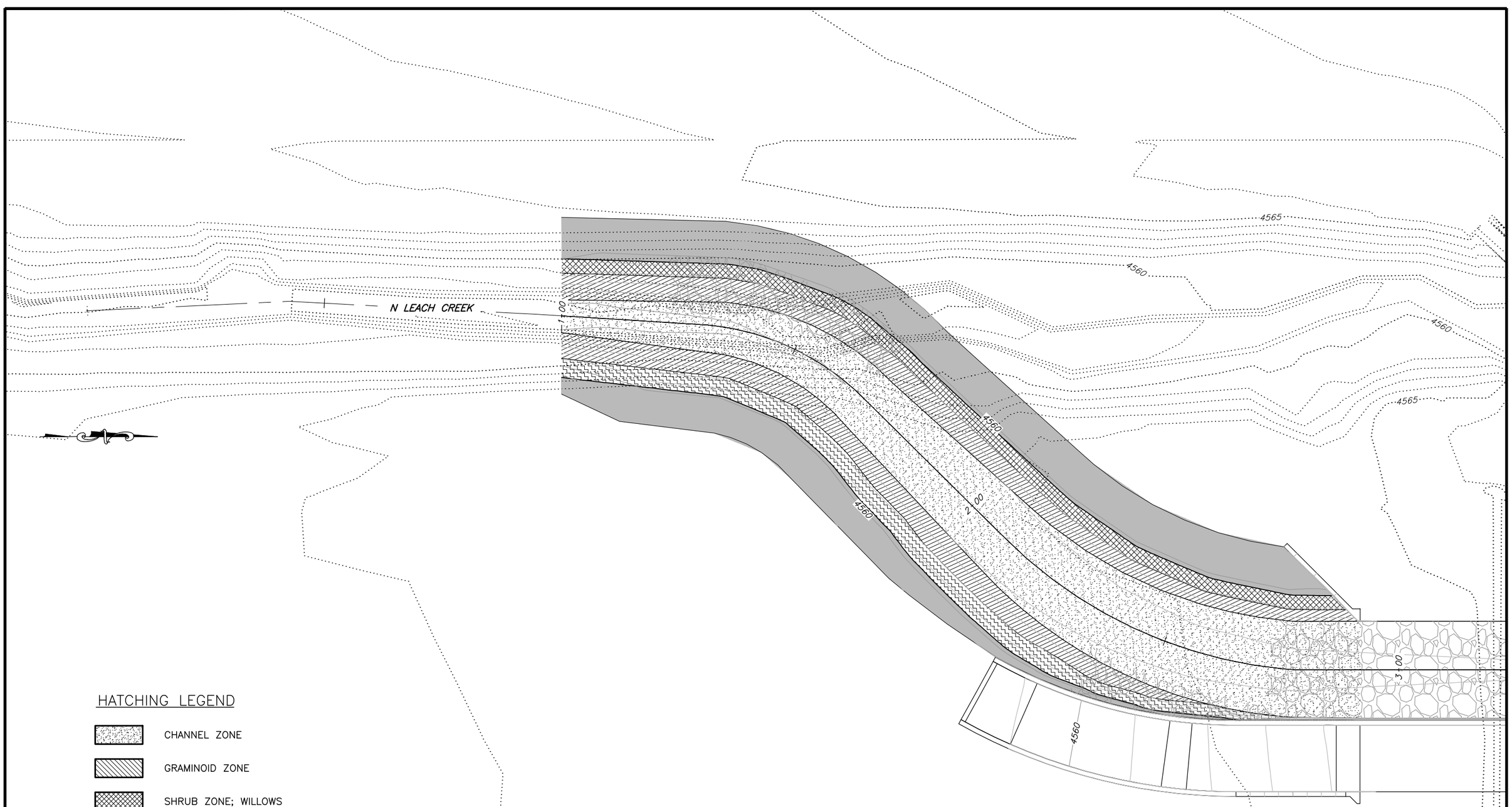
G ROAD BRIDGE REPLACEMENT
N LEACH CREEK
WETLAND REVEGETATION PLAN–NORTH

W01
72



HATCHING LEGEND

- CHANNEL ZONE
- GRAMINOID ZONE
- SHRUB ZONE; WILLOWS
- SHRUB ZONE; COTTONWOODS
- REVEGETATION BY LANDSCAPE ARCHITECT

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PROJECT NO.SGM: 2020-385.001

G ROAD BRIDGE REPLACEMENT
N LEACH CREEK
WETLAND REVEGETATION PLAN-SOUTH

W02
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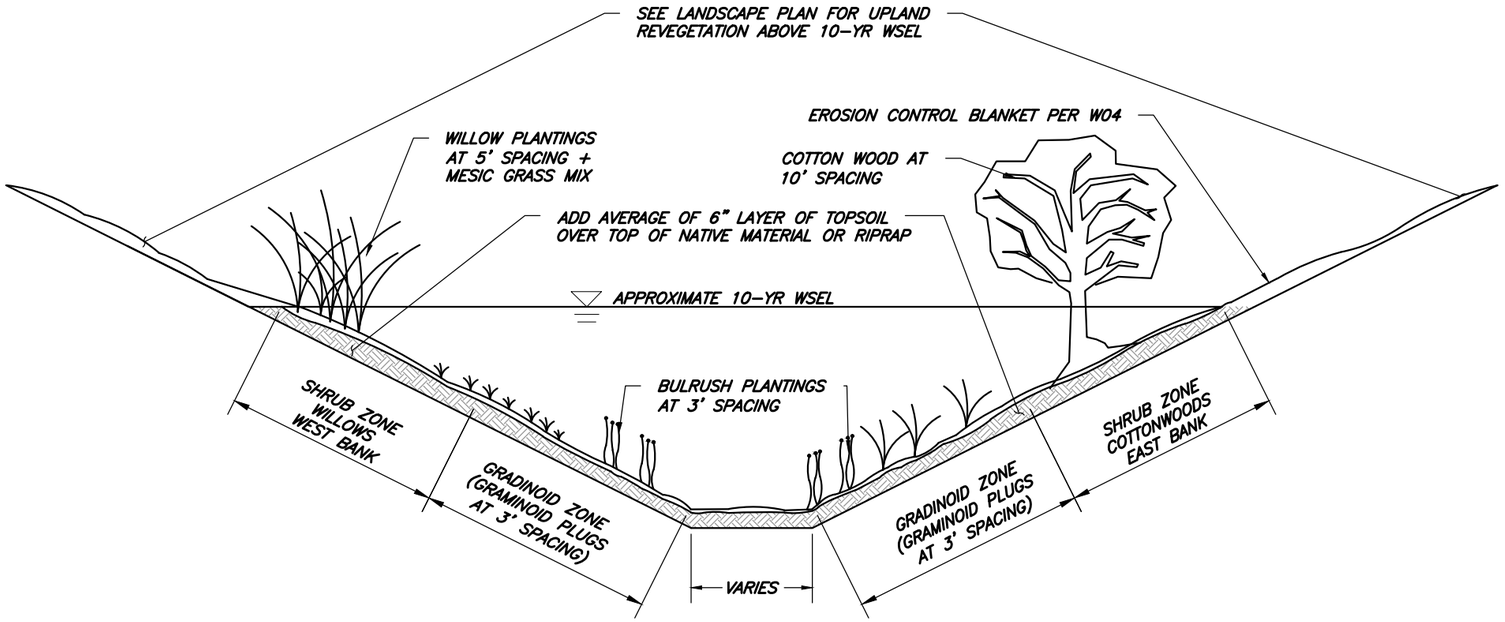

CHANNEL REVEGETATION TYPICAL SECTION

SCALE: NTS

INSTALLATION NOTES FOR RIPRAP AREAS:

1. THE WETLAND REVEGETATION WILL INCLUDE THE AREAS OF RIPRAP ARMORING.
2. AFTER 12" OF RIPRAP PLACEMENT, TOPSOIL WILL BE SIFTED INTO THE RIPRAP TO FILL THE VOIDS AND PROVIDE ADEQUATE ROOT GROWTH SUBSTRATE.
3. AN ADDITIONAL 6" OF TOPSOIL WILL BE PLACED ON TOP OF THE RIPRAP TO GENERATE AN AVERAGE OF 6" DEPTH GROWTH MEDIUM.
4. EROSION CONTROL BLANKET (ECB) WILL BE STRETCHED AND STAKED OVER THE RIPRAP AND TOPSOIL.
5. PLANTINGS WILL BE INSTALLED THROUGH THE ECB AND INTO THE TOPSOIL BELOW.
6. IF NECESSARY, COTTONWOOD PLANTING LOCATIONS MAY BE SHIFTED SLIGHTLY TO PLACE THE ROOT BALLS OUTSIDE OF THE RIPRAP AREAS, AND TO ALLOW DEEPER EXCAVATION INTO THE UNDERLYING NATIVE MATERIAL.

DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

DRAWN BY CWG DATE 2020
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CHECKED BY ALC DATE 2020
APPROVED BY TCP DATE 2020

SCALES:

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ENGINEERING DIVISION
PROJECT NO. 2020-385.001

G ROAD BRIDGE REPLACEMENT
N LEACH CREEK
WETLAND REVEGETATION DETAILS

W03
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ROLLMAX™
ROLLED EROSION CONTROL

Specification Sheet
BioNet® SC150BN™ Erosion Control Blanket

DESCRIPTION

The extended-term double net erosion control blanket shall be a machine-produced mat of 70% agricultural straw and 30% coconut fiber with a functional longevity of up to 18 months. (NOTE: functional longevity may vary depending upon climatic conditions, soil, geographical location, and elevation). The blanket shall be of consistent thickness with the straw and coconut evenly distributed over the entire area of the mat. The blanket shall be covered on the top and bottom sides with a 100% biodegradable woven natural organic fiber netting. The netting shall consist of machine directional strands formed from two intertwined yarns with cross directional strands interwoven through the twisted machine strands (commonly referred to as Leno weave) to form an approximate 0.50 x 1.0 in. (1.27 x 2.54 cm) mesh. The blanket shall be sewn together on 1.50 inch (3.81 cm) centers with degradable thread. The blanket shall be manufactured with a colored thread stitched along both outer edges (approximately 2-5 inches [5-12.5 cm] from the edge) as an overlap guide for adjacent mats.

The SC150BN shall meet Type 3.B specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.17

Material Content		
Matrix	70% Straw Fiber	0.35 lbs/sq yd (0.19 kg/sm)
	30% Coconut Fiber	0.15 lbs/sq yd (0.08 kg/sm)
Netting	Top: Leno woven 100% biodegradable jute	9.35 lb/1000 sq ft (4.5 kg/100 sm)
	Bottom: 100% biodegradable organic jute	7.7 lb/1000 sq ft (3.76 kg/100 sm)
Thread	Biodegradable	

Standard Roll Sizes			
Width	6.67 ft (2.03 m)	8.0 ft (2.4 m)	16 ft (4.87 m)
Length	108 ft (32.92 m)	112 ft (34.14 m)	112 ft (34.14 m)
Weight ± 10%	52.22 lbs (23.69 kg)	65.28 lbs (29.6 kg)	130.5 lbs (59.2 kg)
Area	80 sq yd (66.9 sm)	100 sq yd (83.61 sm)	200 sq yd (167.22 sm)
	Leno weave top only	Leno top and bottom	Leno top and bottom

Index Property	Test Method	Typical
Thickness	ASTM D6525	0.25 in. (6.35 mm)
Resiliency	ECTC Guidelines	86%
Water Absorbency	ASTM D1117	311%
Mass/Unit Area	ASTM D6475	8.32 oz/sy (282.9 g/sm)
Swell	ECTC Guidelines	46%
Smolder Resistance	ECTC Guidelines	Yes
Stiffness	ASTM D1388	0.42 oz-in
Light Penetration	ASTM D6567	7.6%
Tensile Strength - MD	ASTM D6818	201.6 lbs/ft (2.99 kN/m)
Elongation - MD	ASTM D6818	13.4%
Tensile Strength - TD	ASTM D6818	164.4 lbs/ft (2.44 kN/m)
Elongation - TD	ASTM D6818	14.2%
Biomass Improvement	ASTM D7322	641 %

Design Permissible Shear Stress	
Unvegetated Shear Stress	2.10 psf (100 Pa)
Unvegetated Velocity	8.00 fps (2.44 m/s)

Slope Design Data: C Factors			
	Slope Gradients (S)		
Slope Length (L)	≤ 3:1	3:1 – 2:1	≥ 2:1
≤ 20 ft (6 m)	0.001	0.029	0.063
20-50 ft	0.051	0.055	0.092
≥ 50 ft (15.2 m)	0.10	0.080	0.120

Roughness Coefficients – Unveg.	
Flow Depth	Manning's n
≤ 0.50 ft (0.15 m)	0.050
0.50 – 2.0 ft	0.050-0.018
≥ 2.0 ft (0.60 m)	0.018

NORTH AMERICAN GREEN®
Western Green
4609 E. Boonville-New Harmony Rd.
Evansville, IN 47725

nagreen.com
800-772-2040

EC_RMX_MPDS_SC150BN_1.19

NOTES FOR INCLUSION ON PLANSET

Revegetation:

1. Seeding should occur in early spring or late fall to prevent seeds from germinating in summer/early-fall and desiccating, and to prevent seeds from freezing in winter.
2. Containerized stock should be placed into the topsoil directly through the ECB.
3. Hand broadcast seeding (grass seed) and hand placement (wetland stock) will be used exclusively on the project given the steep slopes and the need to preserve the integrity of the ECB surface layer.

Leach Creek Wetland Mitigation Planting

Common Name	*Scientific Name*	*Variety*	*Season*	*Form*	*PLS lbs/acre***
Plant Each of the Following Where Indicated (Shrub Zone)					
Rio Grande Cottonwood	*Populus deltoides*	Containerized stock, min. 5 gallon	Cool	Shrub	1 container per 5 square feet
Coyote Willow	*Salix exigua*	Containerized stock, min. #1 pot	Cool	Shrub	1 container per 5 square feet
Inland Saltgrass	*Distichlis spicata*	As locally available	Warm	Rhizomatous	Up to 10 PLS/acre
Alkali Sacaton	*Sporobolus airoides*	As locally available	Warm	Bunch	Up to 10 PLS/acre
Each of the Following (Graminoid Zone)					
Baltic Rush	*Juncus balticus*	Containerized stock, 10 cubic inch	Cool	Sod-forming	1 container per 3 square feet
Beaked Sedge	*Carex utriculata*	Containerized stock, 10 cubic inch	Cool	Rhizomatous	1 container per 3 square feet
Solely the Following (Channel Zone)					
Maritime Bulrush	*Schoenoplectus maritimus*	Containerized stock, 60 cubic inch	Cool	Rhizomatous	1 container per 3 square feet

*** PLS rate based on assumed hand broadcasting of seed.**

DESCRIPTION	DATE
REVISION ⚠ REV_1	– DATE
REVISION ⚠ REV_2	– DATE
REVISION ⚠ REV_3	– DATE
REVISION ⚠ REV_4	– DATE

DRAWN BY CWG DATE 2020
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CHECKED BY ALC DATE 2020
APPROVED BY TCP DATE 2020

SCALES:

CITY OF Grand Junction COLORADO
SGM 744 Horizon Court, Suite 250 Grand Junction, CO 81506 970.245.2571 www.sgm-inc.com

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.SGM: 2020-385.001

G ROAD BRIDGE REPLACEMENT
N LEACH CREEK
WETLAND REVEGETATION DETAILS (2)

W04
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GENERAL NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE COLORADO DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED 2019; AND AS SUBSEQUENTLY REVISED; THE STANDARD PLANS (M&S STANDARDS) DATED JULY 2019; AND AS SUBSEQUENTLY REVISED; AND IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS INCLUDED HEREIN.

EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M213.

A COLORED STRUCTURAL CONCRETE COATING AND ANTI-GRAFFITI FINISH WILL BE REQUIRED, AS SHOWN ON THE PLANS, ON EXPOSED CONCRETE SURFACES. THE COLOR SHALL BE AS SHOWN IN THE LANDSCAPE PLANS.

ALL EXPOSED CONCRETE CONCRETE SURFACES THAT WILL NOT RECIEVE A STRUCTURAL CONCRETE COATING SHALL RECEIVE A CLASS 1 (ORDINARY SURFACE FINISH) FINAL FINISH TO 1 FOOT BELOW THE GROUND LINE.

THE FOLLOWING STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 50 (ASTM A-572): PILING.

AASHTO M-222 (ASTM A-588) MAY BE SUBSTITUTED FOR M270 GRADE 50 (ASTM A-572) AT NO ADDITIONAL COST TO THE PROJECT.

LEVELING PADS ARE UNLAMINATED BEARINGS. THEY SHALL BE CUT OR MOLDED FROM AASHTO ELASTOMER GRADE 3, 4, OR 5 AS DESCRIBED IN TABLES 705-1 AND 705-2 WITH A DUROMETER (SHORE "A") HARDNESS OF 60.

GRADE 60 REINFORCING STEEL IS REQUIRED.

ALL REINFORCING STEEL SHALL BE NON COATED UNLESS OTHERWISE NOTED.

+ DENOTES COATED (GREEN) REINFORCING STEEL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.

STATIONS, ELEVATIONS, AND DIMENSIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM A RECENT FIELD SURVEY. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.

ALL LONGITUDINAL AND TRANSVERSE DIMENSIONS ARE MEASURED HORIZONTALLY AND INCLUDE NO CORRECTION FOR GRADE.

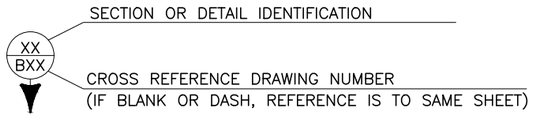
THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 811 (1-800-922-1987) AT LEAST 3 DAYS (2 DAYS NOT INCLUDING THE DAY OF NOTIFICATION) PRIOR TO ANY EXCAVATION OR OTHER EARTHWORK.

THE CONTRACTOR SHALL PROVIDE A PLAN INDICATING THE PROPOSED LOCATION OF ALL EXPANSION JOINTS, CONSTRUCTION JOINTS, AND WEAKENED PLANES IN THE WALLS FOR ENGINEER'S APPROVAL. EXPANSION JOINTS SHALL BE LOCATED AT 88' MAXIMUM SPACING AND WEAKENED PLANES SHALL BE LOCATED AT 22' MAXIMUM SPACING.

DEWATERING SYSTEM TO BE DESIGNED BY CONTRACTOR TO ALLOW THE BRIDGE, WALLS, AND BASE SLAB TO BE CONSTRUCTED IN THE DRY. GEOTECHNICAL INVESTIGATION BY ROCKSOL CONSULTING GROUP, INC AND GROUNDWATER STUDY BY DOWL HAVE BEEN PROVIDED FOR THE CONTRACTOR'S USE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ACTUAL SOIL AND GROUNDWATER CONDITIONS DURING CONSTRUCTION AS THEY MAY VARY FROM THE INVESTIGATIONS AND REPORTS PROVIDED.

ABBREVIATIONS:

BF = BACK FACE
EL = ELEVATION
EX = EXISTING
FG = FINISHED GRADE
GRML = G ROAD MONUMENT LINE
WSEL = WATER SURFACE ELEVATION
SEE M-100-2 FOR OTHER ABBREVIATIONS



DESIGN DATA

AASHTO, 9TH EDITION LRFD WITH CURRENT INTERIMS

DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN

LIVE LOAD: HL-93 (DESIGN TRUCK OR TANDEM, AND DESIGN LANE LOAD)
90 PSF (PEDESTRIAN LOAD ON 24 ROAD BIKE TRAIL)

DEAD LOAD: ASSUMES 5 LBS. PER SQ. FT. FOR UTILITIES
ASSUMES 5 LBS. PER SQ. FT. FOR PERMANENT STEEL DECK FORMS

EARTH VERTICAL: ASSUMES 242 LBS. PER SQ. FT. FOR FILL ON DECK (MAXIMUM THICKNESS OF 1'-8")

REINFORCED CONCRETE:
CLASS D CONCRETE: f'c = 4,500 psi
REINFORCING STEEL: fy = 60,000 psi

STRUCTURAL STEEL:
AASHTO M270 (ASTM A709) GRADE 36 fy = 36,000 psi
AASHTO M270 (ASTM A709) GRADE 50 fy = 50,000 psi

PRECAST PRESTRESSED CONCRETE:
CLASS PS CONCRETE: f'c = (SEE DETAILS)
PRESTRESSING STEEL: f's = 270,000 psi (LOW RELAXATION)

SEISMIC DESIGN CRITERIA

LATITUDE = 39.1063° N
LONGITUDE = 108.6077° W

AASHTO SPECTRUM FOR 7% PE IN 75 YEARS

PERIOD (sec)	Sa (g)
0.0	0.076 PGA - SITE CLASS B
0.2	0.143 S_s - SITE CLASS B
1.0	0.035 S_1 - SITE CLASS B

SPECTRAL RESPONSE ACCELERATIONS:
$A_s = F_{pga}*PGA$, $S_{DS} = F_a*S_s$, AND $S_{D1} = F_v*S_1$
$F_{pga} = 2.50$, $F_a = 2.50$, $F_v = 3.50$

PERIOD (sec)	Sa (g)
0.0	0.191 A_s - SITE CLASS E
0.2	0.356 S_{DS} - SITE CLASS E
1.0	0.123 S_{D1} - SITE CLASS E

SEISMIC PERFORMANCE ZONE = 1

INDEX OF BRIDGE DRAWINGS

BRIDGE DESCRIPTION

1-SIMPLE SPAN (41'-0") BRIDGE,
CONCRETE SLAB AND PRESTRESSED CONCRETE SLAB GIRDER
G ROAD OVER NORTH LEACH CREEK AND 24 ROAD BIKE PATH
VARIES 147'-2" TO 128'-1" IN WIDTH
90°0'0" SKEW
BRIDGE NUMBER GRJ G.0-24.02

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

DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

DRAWN BY CWG DATE 4.7.21
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SCALES:
PLAN

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PROJECT NO.SGM: 2020-385.001

G ROAD BRIDGE REPLACEMENT
GENERAL INFORMATION

B01

SUMMARY OF QUANTITIES

ITEM NO	DESCRIPTION	UNIT	QUANTITY										
			BASE SLAB	ABUTMENT 1	ABUTMENT 2	SUPER–STRUCTURE	WALL 1	WALL 2	WALL 3	WALL 4	WALL 5	WALL 6	TOTAL
202–00400	REMOVAL OF BRIDGE	EACH											1
206–00000	STRUCTURE EXCAVATION	CY											6828
206–00100	STRUCTURE BACKFILL (CLASS 1)	CY											3364
206–00200	STRUCTURE BACKFILL (CLASS 2)	CY											236
206–00360	MECHANICAL REINFORCEMENT OF SOIL	CY											2991
206–00530	FILTER MATERIAL (CLASS C)	CY	174										174
207–00205	TOPSOIL	CY											452
211–03005	DEWATERING	LS											1
502–00460	PILE TIP	EACH	60	16			6	6			3		91
502–11253	STEEL PILING (HP 12X53)	LF	3142	876			335	326			153		4832
514–00100	HAND RAIL	LF	379										379
514–00200	PEDESTRIAN SAFETY RAILING (STEEL)	LF				87							87
515–00120	WATERPROOFING (MEMBRANE)	SY				617							617
517–00000	WATERPROOFING (ASPHALT)	SY			172				25	30		207	434
518–00102	WATERSTOP (SPECIAL)	LF	710										710
518–00106	WATERSTOP (6 INCH)	LF		10	12		14	15	17	16	11	54	149
601–03027	CONCRETE CLASS D (SPECIAL)	CY	297.1		134.1				8.7	9.3		87.5	536.7
601–03040	CONCRETE CLASS D (BRIDGE)	CY		126.4		136.0	17.4	16.7			8.9		305.4
601–40301	STRUCTURAL CONCRETE COATING	SF		1355	1431	512	238	187	252	273		2500	6748
601–40302	STRUCTURAL CONCRETE COATING (ANTI–GRAFFITI)	SF		1355	1431	512	238	187	252	273		2500	6748
602–00000	REINFORCING STEEL	LB	50220	7078	8700		2374	2101	2210	2351	1333	10272	86639
602–00020	REINFORCING STEEL (EPOXY COATED)	LB		11861	15303	21810							48974
608–00000	CONCRETE SIDEWALK	SY	523										523
618–06036	PRESTRESSED CONCRETE SLAB (DEPTH GREATER THAN 13 INCHES)	SF				4779							4779

DESCRIPTION	DATE
REVISION ⚠1 REV_1	– DATE
REVISION ⚠2 REV_2	– DATE
REVISION ⚠3 REV_3	– DATE
REVISION ⚠4 REV_4	– DATE

DRAWN BY CWG DATE 4.7.21
DESIGNED BY CWG DATE 4.7.21
CHECKED BY MCF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES:
PLAN

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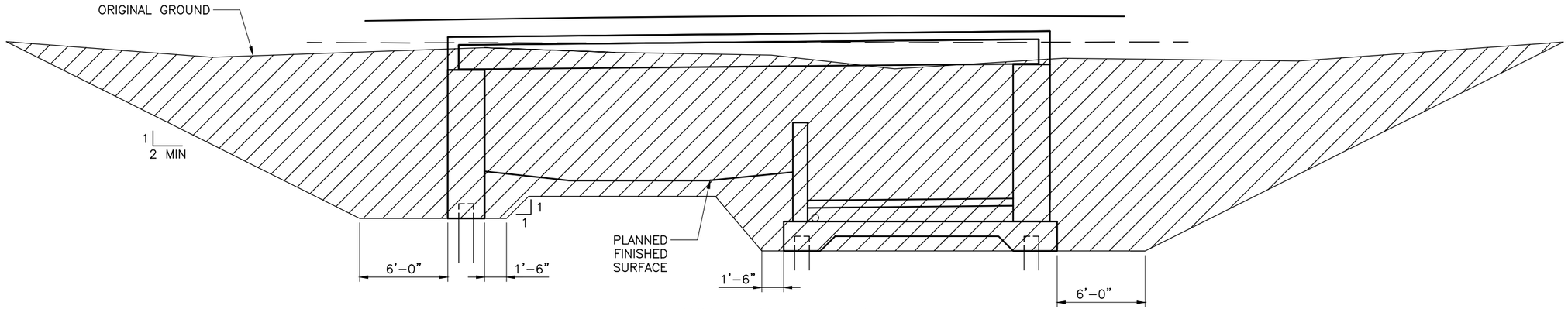
ENGINEERING DIVISION
PROJECT NO.SGM: 2020–385.001

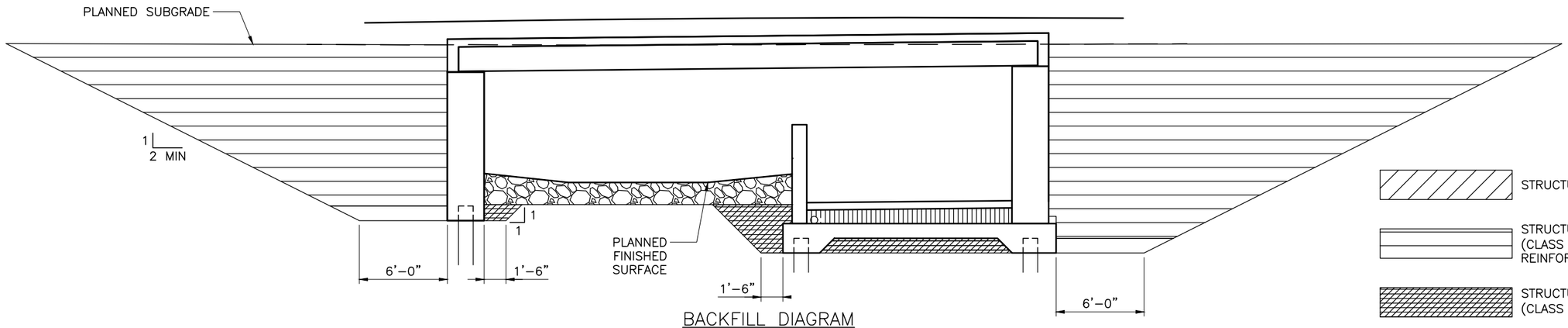
G ROAD BRIDGE REPLACEMENT
SUMMARY OF APPROX. QUANTITIES

B02
77



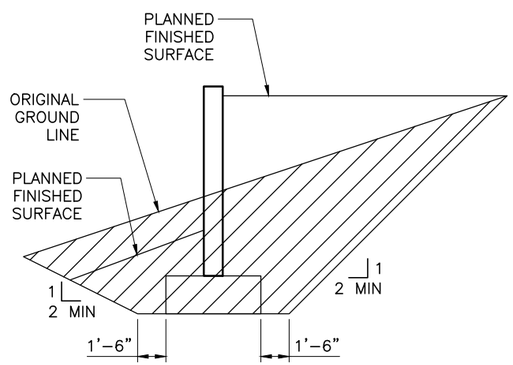
EXCAVATION DIAGRAM

(DIAGRAM IS APPLICABLE TO THE BASE SLAB, ABUTMENTS, AND WALLS 1, 2, AND 6 SEGMENTS C3 AND L8. SEE WALL 6 PLAN FOR SEGMENT DEFINITIONS.)



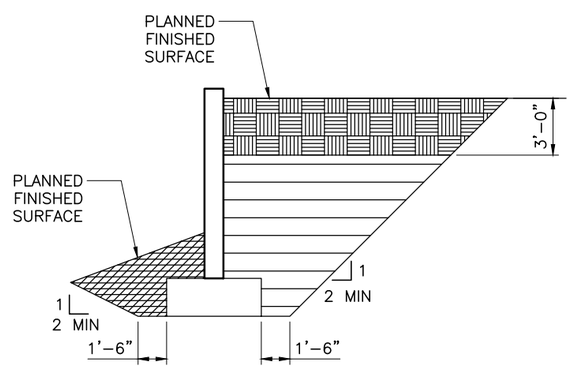
BACKFILL DIAGRAM

(DIAGRAM IS APPLICABLE TO THE BASE SLAB, ABUTMENTS, AND WALLS 1, 2, 3, 4, AND WALL 6 ADJACENT TO N. LEACH CREEK)



WALL EXCAVATION

(DIAGRAM IS APPLICABLE TO WALLS 1, 2, AND 5 AND WALL 6 NOT ADJACENT TO N. LEACH CREEK)



WALL BACKFILL

(DIAGRAM APPLICABLE TO WALLS 5 AND 6 NOT ADJACENT TO N. LEACH CREEK)

STRUCTURE EXCAVATION

STRUCTURE BACKFILL (CLASS 1) WITH MECHANICAL REINFORCEMENT OF SOIL

STRUCTURE BACKFILL (CLASS 2)

FILTER MATERIAL (CLASS C)

RIPRAP

TOPSOIL

NOTES:

1. UNLESS SHOWN OTHERWISE IN THE PLANS, THIS DRAWING GIVES THE MINIMUM EXTENT OF STRUCTURE EXCAVATION AND STRUCTURE BACKFILL. THE CONTRACTOR MAY ELECT TO EXTEND THE STRUCTURE EXCAVATION AND STRUCTURE BACKFILL BEYOND THE LIMITS SHOWN HERE. ANY ADDITIONAL EXCAVATION OR BACKFILL BEYOND THESE LIMITS WILL NOT BE MEASURED NOR PAID FOR.
2. AT THE TOP OF WALLS 3, 4, AND WALL 6 NOT ADJACENT TO N. LEACH CREEK, PROVIDE 3'–0" OF TOP SOIL AT THE TOP OF WALL.

DESCRIPTION	DATE
REVISION ⚠1 REV_1	– DATE
REVISION ⚠2 REV_2	– DATE
REVISION ⚠3 REV_3	– DATE
REVISION ⚠4 REV_4	– DATE

DRAWN BY	MCF	DATE	4.7.21
DESIGNED BY	MCF	DATE	4.7.21
CHECKED BY	MDF	DATE	4.7.21
APPROVED BY	ELK	DATE	4.7.21

SCALES: 1/8" = 1'–0"
PLAN

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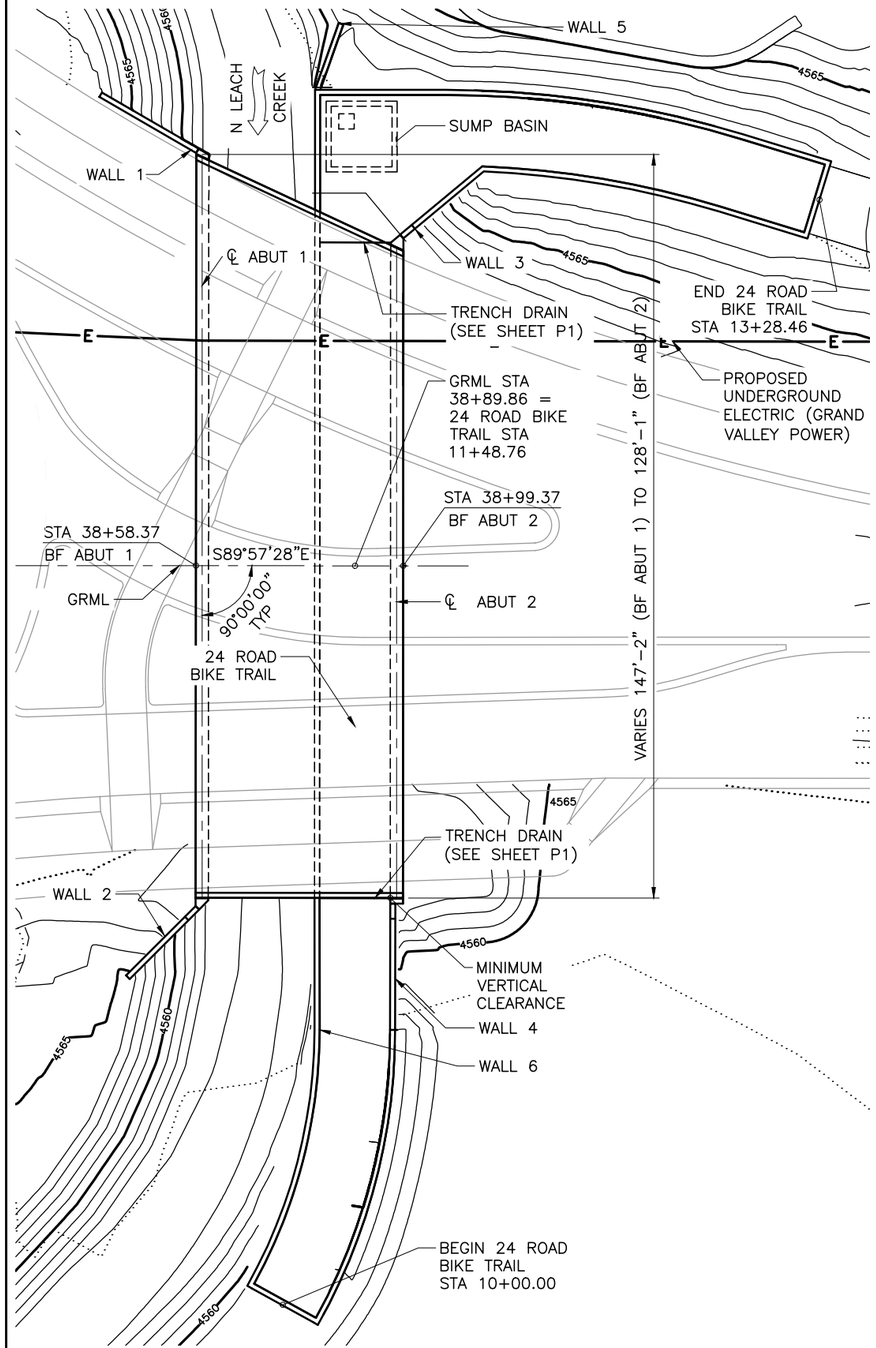
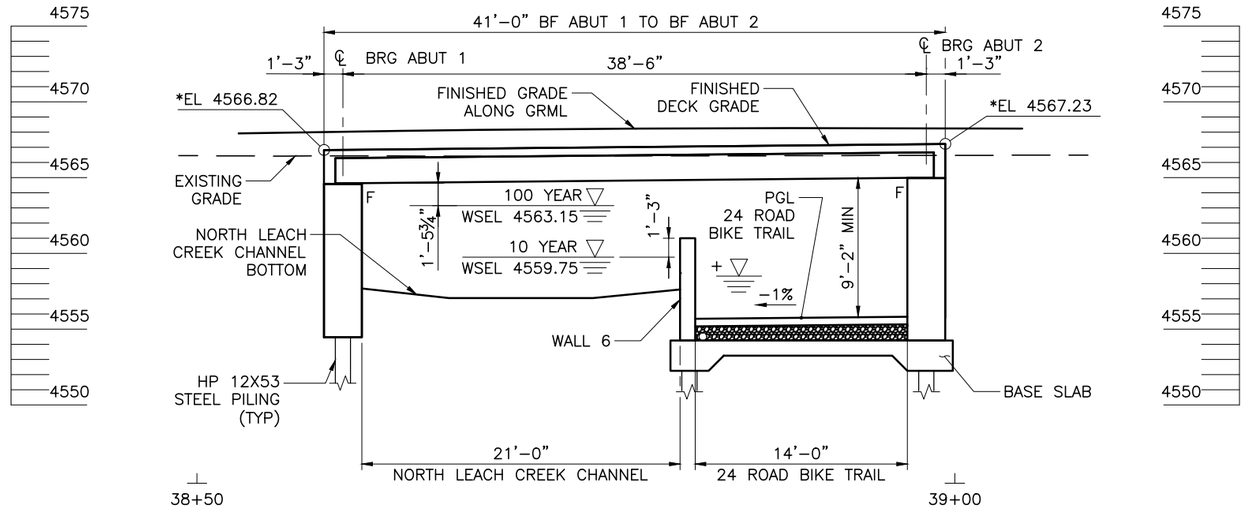
G ROAD BRIDGE REPLACEMENT
EXCAVATION AND BACKFILL DIAGRAMS

B03
78



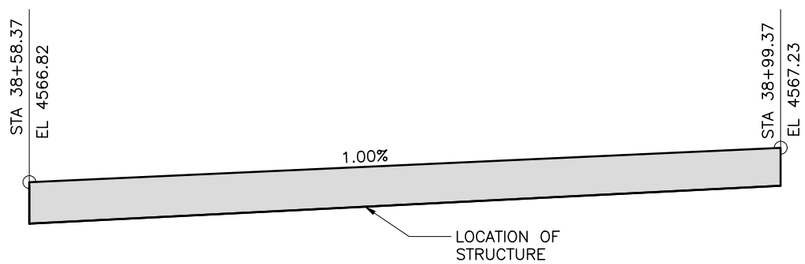
PLAN



SECTION

+APPROXIMATE GROUNDWATER ELEVATION MEASURED DURING JUNE 2020 GEOTECHNICAL INVESTIGATION IS 4558.50

*ELEVATIONS AT TOP OF DECK
DECK HAS NO CROSS SLOPE
(TAKEN ALONG GRML)



G ROAD MONUMENT LINE PROFILE GRADE

DESCRIPTION	DATE
REVISION ⚠1 REV 1	DATE
REVISION ⚠2 REV 2	DATE
REVISION ⚠3 REV 3	DATE
REVISION ⚠4 REV 4	DATE

DRAWN BY	CWG	DATE	4.7.21
DESIGNED BY	CWG	DATE	4.7.21
CHECKED BY	MCF	DATE	4.7.21
APPROVED BY	ELK	DATE	4.7.21

SCALES: SECTION 1" = 10'
PLAN
0 7.5 15 30

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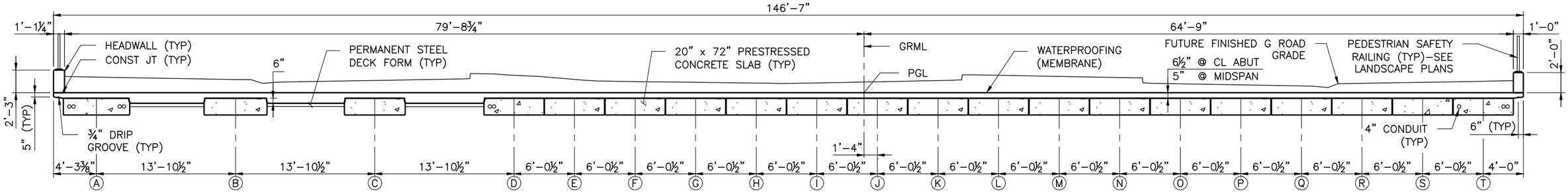
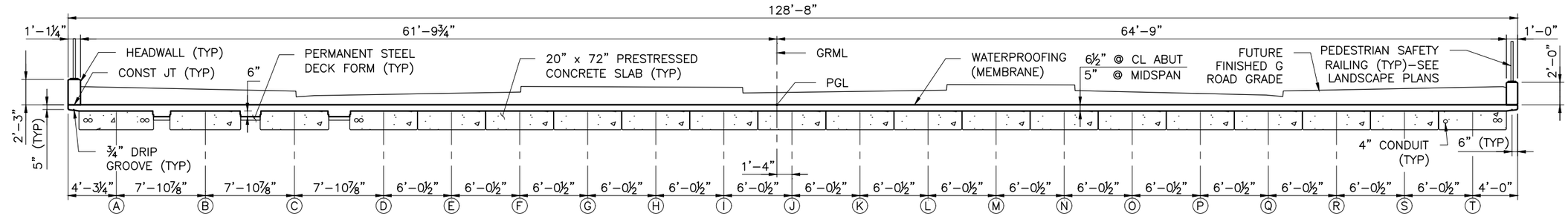
G ROAD BRIDGE REPLACEMENT
GENERAL LAYOUT

B04
79



TYPICAL SECTION AT ℄ BRG ABUTMENT 1



TYPICAL SECTION AT ℄ BRG ABUTMENT 2

NOTES:

1. TYPICAL SECTIONS ARE LOOKING AHEAD ON STATION.
2. ALL DIMENSIONS ARE NORMAL TO THE GRML.
3. ALL FACES OF HEADWALL, EDGE OF DECK, DECK OVERHANG, AND OUTSIDE FACE OF EXTERIOR GIRDER TO RECEIVE STRUCTURAL CONCRETE COATING AND ANTI-GRAFFITI COATING.

DESCRIPTION	DATE
REVISION ⚠1 REV 1	– DATE
REVISION ⚠2 REV 2	– DATE
REVISION ⚠3 REV 3	– DATE
REVISION ⚠4 REV 4	– DATE

DRAWN BY CWG DATE 4.7.21
DESIGNED BY CWG DATE 4.7.21
CHECKED BY MCF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES: 1"=10'-0" (SECTIONS)
PLAN

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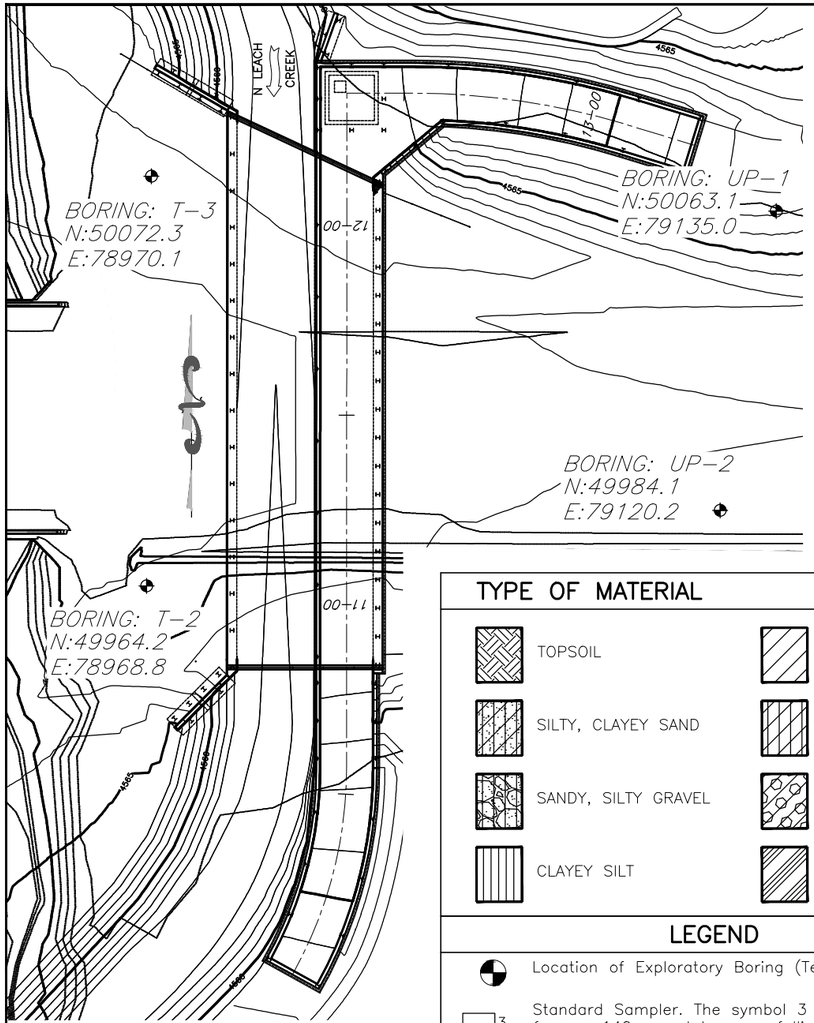
PROJECT NO.SGM: 2020-385.001

G ROAD BRIDGE REPLACEMENT
TYPICAL SECTIONS

B05
80

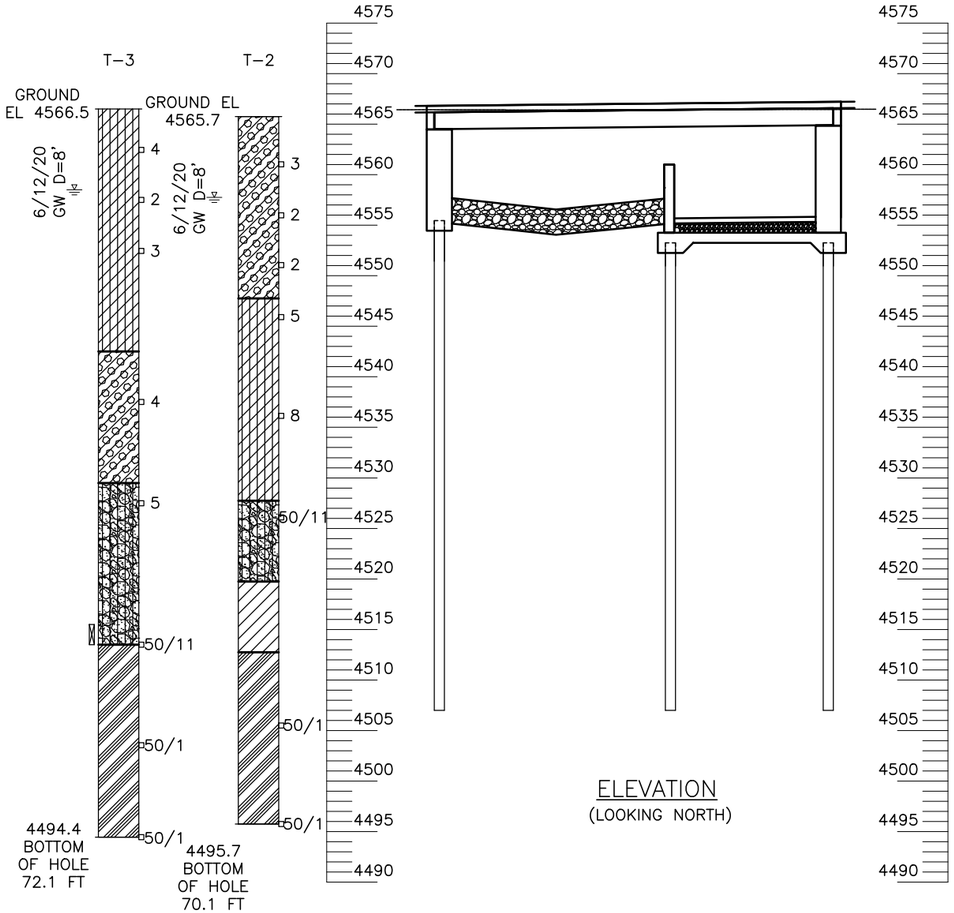


TYPE OF MATERIAL

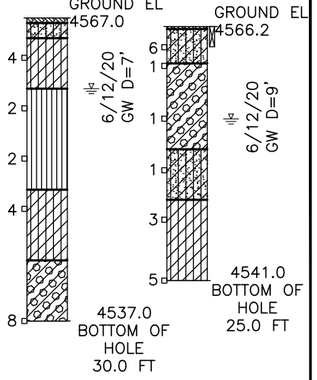
- TOPSOIL
- CLAY
- SILTY, CLAYEY SAND
- SILTY CLAY
- SANDY, SILTY GRAVEL
- SILTY, SANDY CLAY
- CLAYEY SILT
- CLAYSTONE BEDROCK

LEGEND

- Location of Exploratory Boring (Test Hole)
- 3 — Standard Sampler. The symbol 3 indicates 3 blows from a 140 pound hammer falling 30 inches was used to drive the sampler 12 inches.
- Bulk Sample obtained from auger cuttings at depths indicated.



ELEVATION
(LOOKING NORTH)



NOTES:

1. BOREHOLES WERE DRILLED ON JUNE 10–12, 2020. BOREHOLES WERE DRILLED WITH A SOLID STEM AUGER.
2. TEST HOLE DESCRIPTIONS ARE SUBJECT TO EXPLANATIONS CONTAINED IN THE REPORT, ROCKSOL PROJECT NO. 599.07.
3. THE BORINGS WERE LOCATED IN THE FIELD PER NORTHING/EASTING CONTAINED IN THE GEOTECH REPORT. THESE LOCATIONS HAVE NOT BEEN SURVEYED OR MEASURED OTHERWISE. ACTUAL LOCATIONS MAY VARY FROM THOSE SHOWN IN THE PLANS.
4. THE LINES BETWEEN THE MATERIALS SHOWN IN THE TEST HOLE LOGS REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN MATERIAL TYPES AND THE ACTUAL TRANSITIONS MAY BE GRADUAL.
5. GROUND WATER LEVELS SHOWN ON THE LOGS WERE MEASURED AT THE TIMES AND UNDER CONDITIONS INDICATED. FLUCTUATIONS IN THE WATER LEVEL MAY OCCUR WITH TIME.

SUMMARY OF TEST RESULTS

SAMPLE LOCATION			CLASSIFICATION		GRADING ANALYSIS (%)			ATTERBERG LIMITS			WATER CONTENT (%)	UNIT WEIGHT (PCF)
BORE HOLE	DEPTH (FT)	SAMPLE TYPE	SOIL OR BEDROCK TYPE	AASHTO	GRAVEL	SAND	SILT & CLAY	LIQUID LIMIT	PLASTIC LIMIT	PLASTIC INDEX		
T-2	4		CLAY, SILTY	A-4 (0)	--	--	87.4	21	18	3	23.2	--
T-2	19		CLAY, SILTY	--	--	--	95.9	--	--	--	27.9	95.3
T-2	39		GRAVEL, SANDY TO SILTY WITH COBBLES	A-3 (0)	--	--	10.3	NP	NP	NP	6.8	--
T-2	60		CLAYSTONE BEDROCK	--	--	--	51.7	--	--	--	13.5	--
T-3	19		CLAY, SILTY	--	--	--	98.3	--	--	--	28.1	91.6
T-3	39		GRAVEL, SANDY WITH COBBLES	A-1-a (0)	57.9	34.8	7.3	NP	NP	NP	5.3	--
T-3	53-72		CLAYSTONE BEDROCK	A-6 (4)	8.9	35.8	55.4	27	15	12	--	--
UP-1	4		CLAY, SILTY	--	--	--	98.9	--	--	--	25.3	--
UP-2	0-4		SAND, SILTY WITH CLAY	A-4 (5)	4.5	20	75.4	26	16	10	--	--
UP-2	2		SAND, SILTY WITH CLAY	--	--	--	20	--	--	--	9.6	--
UP-2	4		CLAY, SILTY WITH SAND	--	--	--	80.2	--	--	--	23.2	--

DESCRIPTION	DATE
REVISION 1 REV 1	– DATE
REVISION 2 REV 2	– DATE
REVISION 3 REV 3	– DATE
REVISION 4 REV 4	– DATE

DRAWN BY KAR DATE 4.7.21
DESIGNED BY MCF DATE 4.7.21
CHECKED BY KAR DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES: PLAN 0 10 20 40

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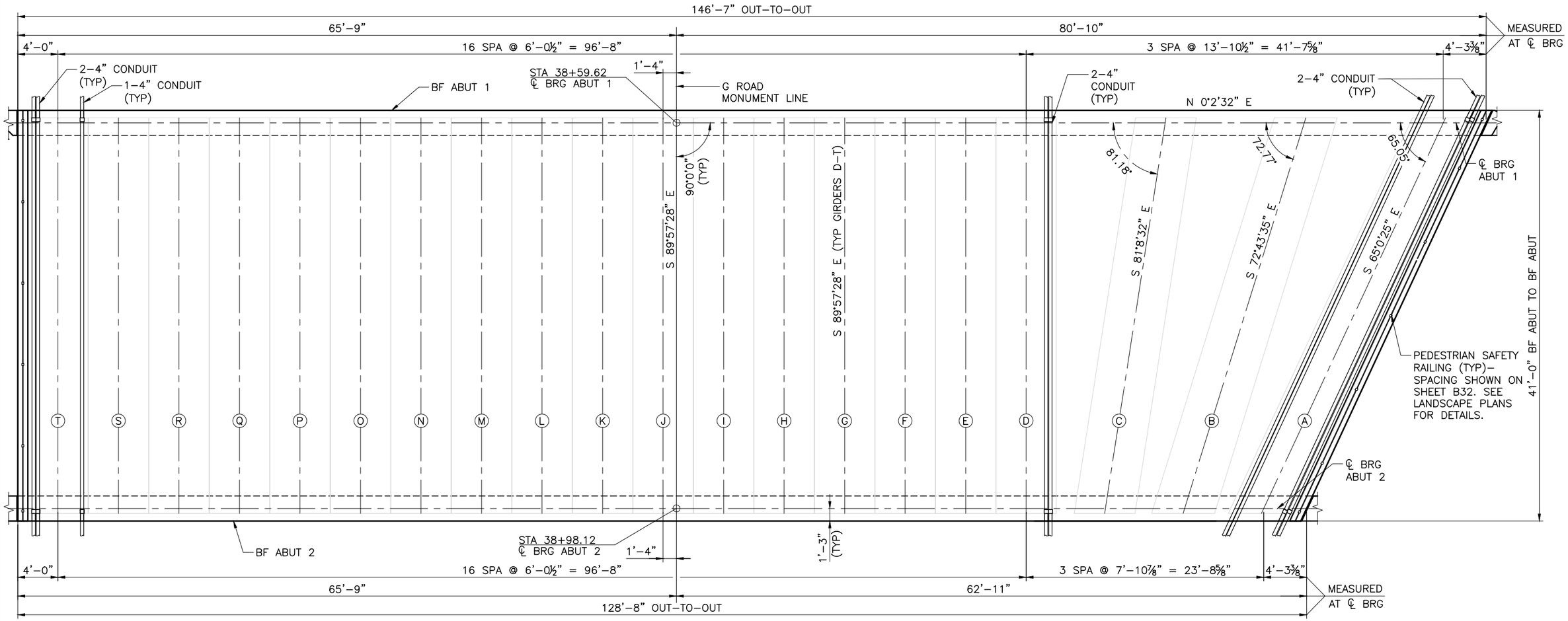
G ROAD BRIDGE REPLACEMENT
SITE GEOLOGY

B06
81



CONSTRUCTION LAYOUT

DESCRIPTION	DATE
REVISION ⚠1 REV 1	– DATE
REVISION ⚠2 REV 2	– DATE
REVISION ⚠3 REV 3	– DATE
REVISION ⚠4 REV 4	– DATE

DRAWN BY	CWG	DATE	4.7.21
DESIGNED BY	CWG	DATE	4.7.21
CHECKED BY	MCF	DATE	4.7.21
APPROVED BY	ELK	DATE	4.7.21

SCALES: PLAN 0 2.5 5 10

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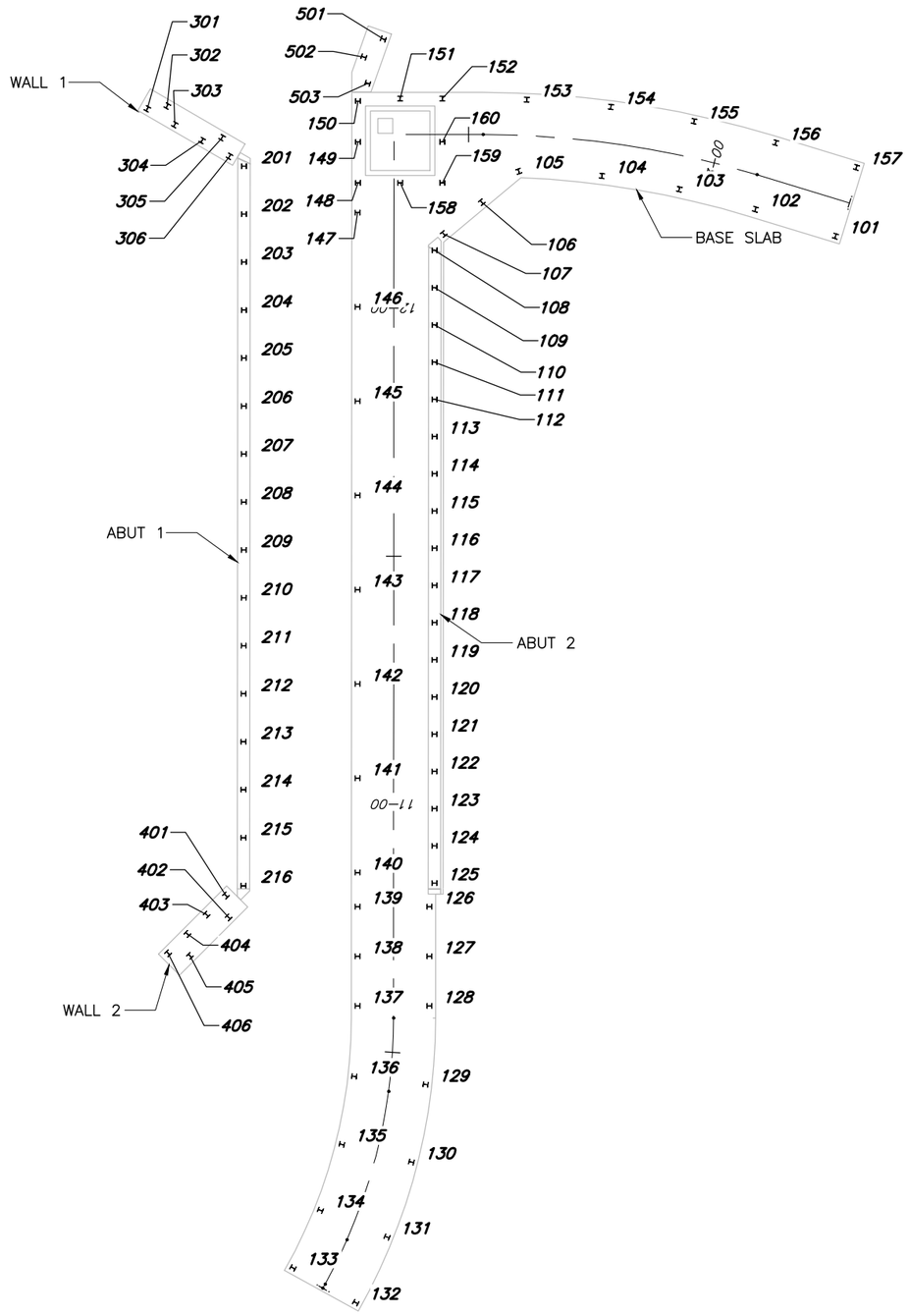
PROJECT NO.SGM: 2020-385.001

G ROAD BRIDGE REPLACEMENT
CONSTRUCTION LAYOUT

B07
82



PILING LAYOUT

PILE NUMBERS CORRESPOND TO THE NUMBERS IN THE PILE SCHEDULE

NOTES:

1. STEEL PILES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CDOT SPECIFICATION 502.
2. THE FOUNDATION DESIGN IS BASED UPON THE GEOTECHNICAL RECOMMENDATIONS PREPARED BY ROCKSOL CONSULTING GROUP, INC. PROJECT NO. 599.07, DATED NOVEMBER 12, 2020.
3. ALL HORIZONTAL PILING LOCATION DIMENSIONS ARE SHOWN AT THE BOTTOM OF CONCRETE.
4. ORIENT PILES WITH WEBS NORMAL TO THE FACE OF THE ABUTMENT OR WALL IN WHICH THEY ARE BELOW.
5. ALL STEEL PILES SHALL BE HP 12x53, GRADE 50. ALL PILES SHALL BE REINFORCED WITH AN APPROVED COMMERCIAL TIP.
6. STEEL PILING SHALL BE DRIVEN INTO THE BEDROCK TO A DEPTH SUFFICIENT TO RESIST THE MAXIMUM LOAD INDICATED ON THE PLAN.
7. PILE DRIVING ANALYZER (PDA) IS REQUIRED FOR THIS PROJECT PER STANDARD SPECIFICATION 502. THE PDA MONITORING SHALL BE PERFORMED BY THE CONTRACTOR ON A MINIMUM OF ONE DRIVEN PILE PER QUADRANT. THE COST OF PDA MONITORING SHALL BE INCLUDED IN PAY ITEM 502 FOR STEEL PILING.

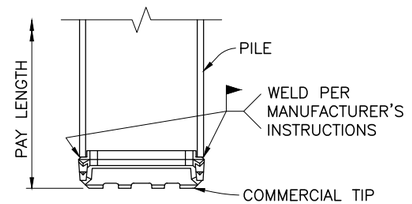
NORTHWEST QUADRANT	PILES 301–306 AND 201–207
SOUTHWEST QUADRANT	PILES 208–216 AND 401–406
NORTHEAST QUADRANT	PILES 501–503, 145–160, 101–114
SOUTHEAST QUADRANT	PILES 115–144.

8. FULL LENGTH PILES SHALL BE USED WHERE PRACTICABLE. THE NUMBER OF SPLICES SHALL BE KEPT TO A MINIMUM.
9. THE CONTRACTOR'S FIELD ENGINEER SHALL RECORD ACTUAL PILE TIP ELEVATIONS IN THE PILE DATA TABLE FOR AS–CONSTRUCTED PLANS.

DESIGN DATA:

PILES ARE DESIGNED PER AASHTO LRFD FOR COMBINED END BEARING AND SIDE RESISTANCE.

THE STRENGTH LIMIT RESISTANCE FACTOR FOR AXIAL RESISTANCE IS 0.65 (WITH PDA).



REINFORCING TIP DETAIL

USE COMMERCIAL TIP APF HARD BITE 77600, 77750, DFP H–776, VERSA–STEEL VS–300, CONSTRUCTION SUPPLY HT–3300 OR APPROVED ALTERNATE.

Know what's below. Call before you dig.

DESCRIPTION	DATE
REVISION ⚠1 REV 1	– DATE
REVISION ⚠2 REV 2	– DATE
REVISION ⚠3 REV 3	– DATE
REVISION ⚠4 REV 4	– DATE

DRAWN BY CWG DATE 3.8.21
DESIGNED BY CWG DATE 3.8.21
CHECKED BY MCF DATE 3.8.21
APPROVED BY XXX DATE X.XX.21

SCALES: PLAN 0 7.5 15 30

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ENGINEERING DIVISION
PROJECT NO.SGM: 2020–385.001

G ROAD BRIDGE REPLACEMENT
PILING LAYOUT (1)

B08
83

PILE SCHEDULE										
LOCATION (UNDER WALL / ABUTMENT)	PILE ID	NORTHING	EASTING	BATTER	MAXIMUM FACTORED LOAD (KIPS)	MAXIMUM SERVICE LOAD (KIPS)	PILE CUTOFF ELEVATION	ESTIMATED PILE TIP ELEVATION	MINIMUM PILE TIP ELEVATION	ACTUAL PILE TIP ELEVATION
BASE SLAB (WALL 6)	101	50073.7132	79110.7237	NO	164	125	4559.04	4507	4509	
	102	50079.1453	79094.5812	NO	164	125	4557.80	4507	4509	
	103	50083.1752	79079.2264	NO	164	125	4556.60	4507	4509	
	104	50085.8781	79063.6299	NO	164	125	4555.40	4507	4509	
BASE SLAB (WALL 3)	105	50086.7974	79046.8833	NO	164	125	4554.14	4507	4509	
	106	50080.5484	79039.4067	NO	164	125	4553.57	4507	4509	
	107	50074.1629	79031.7109	NO	164	125	4552.86	4507	4509	
BASE SLAB (ABUTMENT 2)	108	50070.8352	79029.8887	NO	256	151	4552.86	4507	4509	
	109	50063.3352	79029.9429	NO	256	151	4552.88	4507	4509	
	110	50055.8352	79029.8848	NO	256	151	4552.90	4507	4509	
	111	50048.3352	79029.8828	NO	256	151	4552.92	4507	4509	
	112	50040.8352	79029.8808	NO	256	151	4552.94	4507	4509	
	113	50033.3352	79029.8788	NO	256	151	4552.95	4507	4509	
	114	50025.8352	79029.8768	NO	256	151	4552.97	4507	4509	
	115	50018.3352	79029.8748	NO	256	151	4552.99	4507	4509	
	116	50010.8352	79029.8728	NO	256	151	4553.02	4507	4509	
	117	50003.3352	79029.8708	NO	256	151	4553.07	4507	4509	
	118	49995.8352	79029.8688	NO	256	151	4553.11	4507	4509	
	119	49988.3352	79029.8668	NO	256	151	4553.16	4507	4509	
	120	49980.8352	79029.8648	NO	256	151	4553.20	4507	4509	
	121	49973.3352	79029.8628	NO	256	151	4553.24	4507	4509	
	122	49965.8352	79029.8609	NO	256	151	4553.29	4507	4509	
	123	49958.3352	79029.8589	NO	256	151	4553.33	4507	4509	
	124	49950.8352	79029.8569	NO	256	151	4553.38	4507	4509	
	125	49943.3352	79029.8549	NO	256	151	4553.42	4507	4509	
BASE SLAB (WALL 4)	126	49938.6072	79028.8524	NO	164	125	4553.45	4507	4509	
	127	49928.6072	79028.8489	NO	164	125	4554.15	4507	4509	
	128	49918.6080	79028.8453	NO	164	125	4554.95	4507	4509	
BASE SLAB (WALL 6)	129	49902.7405	79028.0777	NO	164	125	4556.12	4507	4509	
	130	49887.1148	79025.2230	NO	164	125	4557.12	4507	4509	
	131	49872.0122	79020.2992	NO	164	125	4558.11	4507	4509	
	132	49858.7841	79014.0013	NO	164	125	4559.03	4507	4509	
	133	49865.7902	79001.3326	NO	164	125	4559.03	4507	4509	
	134	49877.4155	79006.8630	NO	164	125	4558.11	4507	4509	
	135	49890.6695	79011.1804	NO	164	125	4557.12	4507	4509	
	136	49904.3897	79013.6861	NO	164	125	4556.12	4507	4509	
	137	49918.6066	79014.3541	NO	164	125	4554.95	4507	4509	
	138	49928.6076	79014.3544	NO	164	125	4554.15	4507	4509	
	139	49938.6076	79014.3547	NO	164	125	4553.45	4507	4509	
	140	49945.4741	79014.3564	NO	164	125	4553.41	4507	4509	
	141	49964.4741	79014.3564	NO	164	125	4553.30	4507	4509	
	142	49983.4741	79014.3564	NO	164	125	4553.18	4507	4509	
	143	50002.4741	79014.3564	NO	164	125	4553.07	4507	4509	
BASE SLAB (WALL 6)	144	50021.4741	79014.3564	NO	164	125	4552.98	4507	4509	
	145	50040.4741	79014.3564	NO	164	125	4552.94	4507	4509	
	146	50059.4741	79014.3564	NO	164	125	4552.89	4507	4509	
	147	50078.4741	79014.3564	NO	164	125	4552.85	4507	4509	
	148	50084.4673	79014.4432	NO	164	125	4552.83	4507	4509	
	149	50092.7027	79014.4432	NO	164	125	4552.81	4507	4509	
	150	50100.9381	79014.4432	NO	164	125	4552.81	4507	4509	
	151	50101.4381	79022.9492	NO	164	125	4552.80	4507	4509	
	152	50101.4381	79031.4553	NO	164	125	4552.99	4507	4509	
	153	50101.2437	79048.4774	NO	164	125	4554.21	4507	4509	
	154	50099.7720	79065.4334	NO	164	125	4555.40	4507	4509	
	155	50096.8657	79082.2033	NO	164	125	4556.60	4507	4509	
	156	50092.5470	79098.6661	NO	164	125	4557.80	4507	4509	
	157	50087.5832	79114.9513	NO	164	125	4559.04	4507	4509	
	158	50084.4673	79022.9492	NO	164	125	4552.80	4507	4509	
	159	50084.4673	79031.4553	NO	164	125	4553.00	4507	4509	
	160	50092.7027	79031.4553	NO	164	125	4553.00	4507	4509	

PILE SCHEDULE										
LOCATION (UNDER WALL / ABUTMENT)	PILE ID	NORTHING	EASTING	BATTER	MAXIMUM FACTORED LOAD (KIPS)	MAXIMUM SERVICE LOAD (KIPS)	PILE CUTOFF ELEVATION	ESTIMATED PILE TIP ELEVATION	MINIMUM PILE TIP ELEVATION	ACTUAL PILE TIP ELEVATION
ABUTMENT 1	201	50087.8234	78991.4612	NO	260	141	4557.16	4507	4509	
	202	50078.1568	78991.4541	NO	260	141	4557.10	4507	4509	
	203	50068.4901	78991.4470	NO	260	141	4557.05	4507	4509	
	204	50058.8234	78991.4399	NO	260	141	4557.00	4507	4509	
	205	50049.1568	78991.4327	NO	260	141	4556.94	4507	4509	
	206	50039.4901	78991.4256	NO	260	141	4556.89	4507	4509	
	207	50029.8234	78991.4185	NO	260	141	4556.84	4507	4509	
	208	50020.1568	78991.4114	NO	260	141	4556.78	4507	4509	
	209	50010.4901	78991.4043	NO	260	141	4556.73	4507	4509	
	210	50000.8235	78991.3972	NO	260	141	4556.67	4507	4509	
	211	49991.1568	78991.3906	NO	260	141	4556.62	4507	4509	
	212	49981.4901	78991.3829	NO	260	141	4556.57	4507	4509	
	213	49971.8235	78991.3763	NO	260	141	4556.51	4507	4509	
	214	49962.1568	78991.3691	NO	260	141	4556.46	4507	4509	
	215	49952.4901	78991.3620	NO	260	141	4556.41	4507	4509	
	216	49942.8235	78991.3548	NO	260	141	4556.35	4507	4509	
WALL 1	301	50099.3820	78971.9673	NO	147	100	4559.68	4507	4509	
	302	50099.9509	78975.9799	4V:1H	147	100	4559.68	4507	4509	
	303	50096.1904	78977.4911	NO	147	100	4559.68	4507	4509	
	304	50092.9988	78983.0149	NO	147	100	4554.91	4507	4509	
	305	50093.4346	78986.9750	4V:1H	147	100	4554.91	4507	4509	
	306	50089.8068	78988.5387	NO	147	100	4554.91	4507	4509	
WALL 2	401	49940.8504	78987.8060	NO	159	109	4554.10	4507	4509	
	402	49936.4341	78988.3395	4V:1H	159	109	4554.10	4507	4509	
	403	49936.9697	78983.9252	NO	159	109	4554.10	4507	4509	
	404	49933.0890	78980.0445	NO	159	109	4557.61	4507	4509	
	405	49928.6732	78980.5786	4V:1H	159	109	4557.61	4507	4509	
	406	49929.2093	78976.1649	NO	159	109	4557.61	4507	4509	
WALL 5	501	50113.4319	79019.5501	NO	70	55	4552.60	4507	4509	
	502	50109.8117	79015.6130	4V:1H	70	55	4552.60	4507	4509	
	503	50104.5197	79016.3881	NO	70	55	4552.60	4507	4509	

Know what's below.
Call before you dig.

DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

DRAWN BY CWG DATE 4.7.21
DESIGNED BY CWG DATE 4.7.21
CHECKED BY MCF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES:
PLAN

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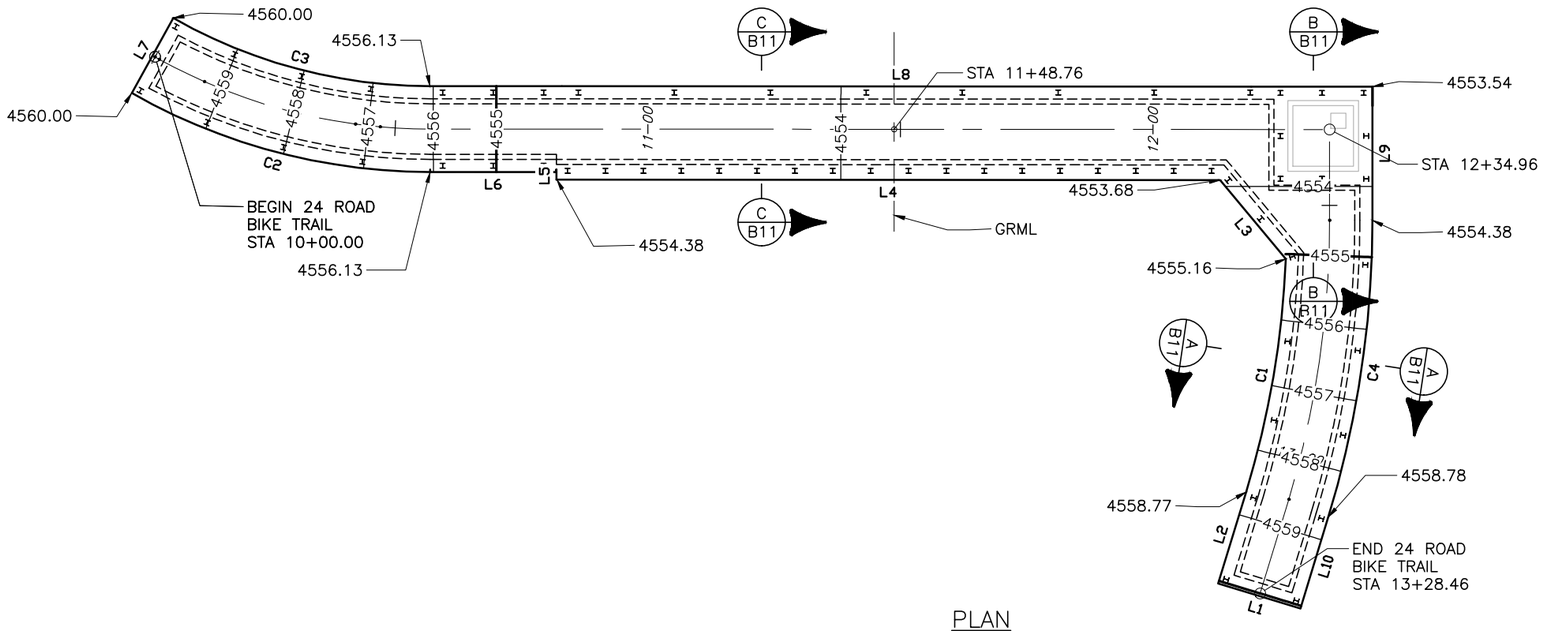
PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO.SGM: 2020-385.001

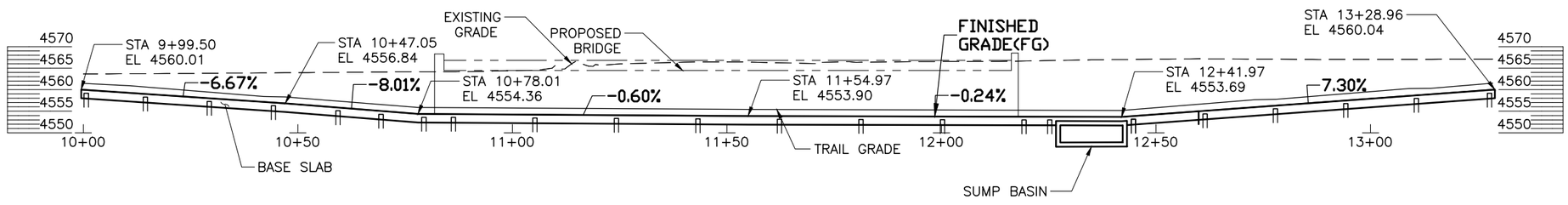
G ROAD BRIDGE REPLACEMENT
PILING LAYOUT (2)

B09
84



PLAN

(ELEVATIONS ARE AT TAKEN AT TOP OF BASE SLAB)



PROFILE

(FOR CLARITY, ONLY WALL 6 PILES ARE SHOWN)

LINE TABLE: ALIGNMENTS				
LINE	START N	START E	BEARING	LENGTH
L1	50088.4144'	79116.5114'	S16°57'05"W	17.00'
L2	50072.1530'	79111.5549'	N73°02'55"W	18.91'
L3	50085.5291'	79047.3124'	S50°12'45"W	20.32'
L4	50072.5257'	79031.6983'	S0°02'29"W	131.38'
L5	49941.1473'	79031.6033'	N89°57'38"W	1.50'
L6	49941.1484'	79030.1033'	S0°00'06"E	25.02'
L7	49857.0787'	79014.4927'	N61°02'27"W	16.99'
L8	49916.1139'	79013.1041'	N0°01'50"E	186.57'
L9	50102.6881'	79013.2040'	N90°00'00"E	26.45'
L10	50093.9334'	79098.4049'	S73°02'55"E	18.92'

CURVE TABLE								
CURVE	START N	START E	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	50077.6674'	79093.4635'	183.23'	46.94'	23.60'	46.82'	N80°19'57"W	14°40'47"
C2	49916.1329'	79030.1041'	119.50'	61.77'	31.59'	61.08'	S14°48'28"W	29°36'56"
C3	49865.3055'	78999.6262'	102.65'	53.16'	27.19'	52.57'	N14°51'24"E	29°40'12"
C4	50102.6881'	79039.6554'	201.50'	59.62'	30.03'	59.40'	S81°31'27"E	16°57'05"

DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

DRAWN BY CWG DATE 4.7.21
DESIGNED BY CWG DATE 4.7.21
CHECKED BY MCF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES:
PLAN
0 7.5 15 30

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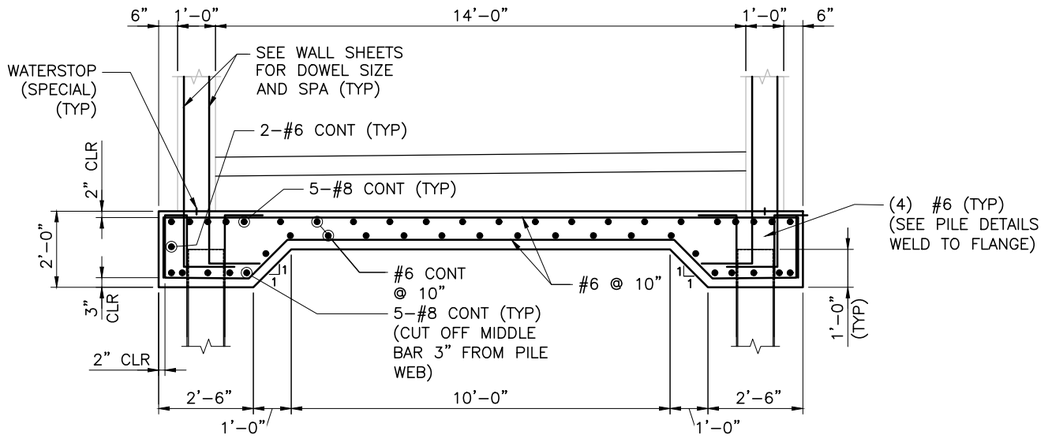
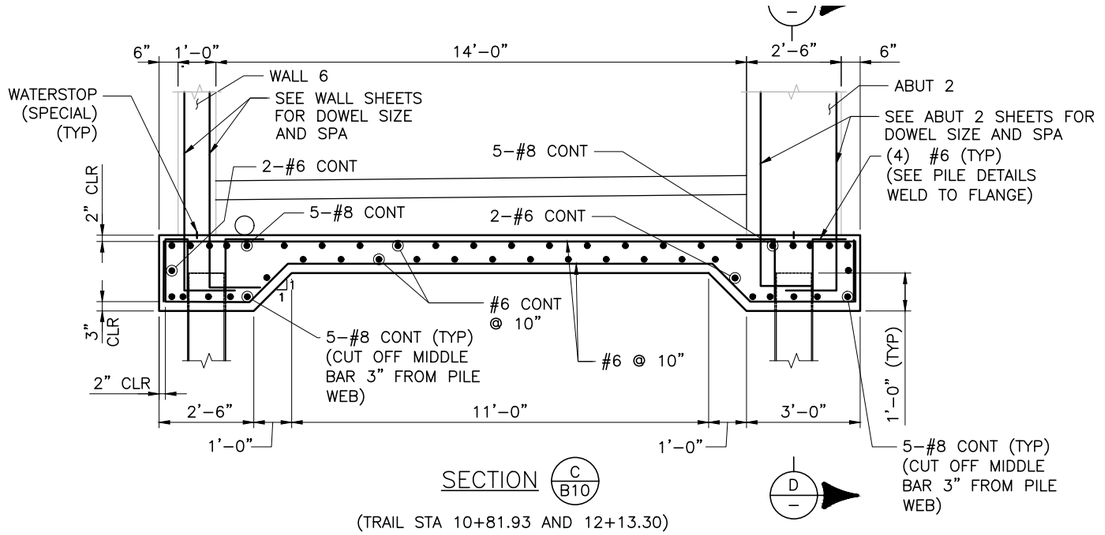
G ROAD BRIDGE REPLACEMENT
BASE SLAB LAYOUT

B10
85



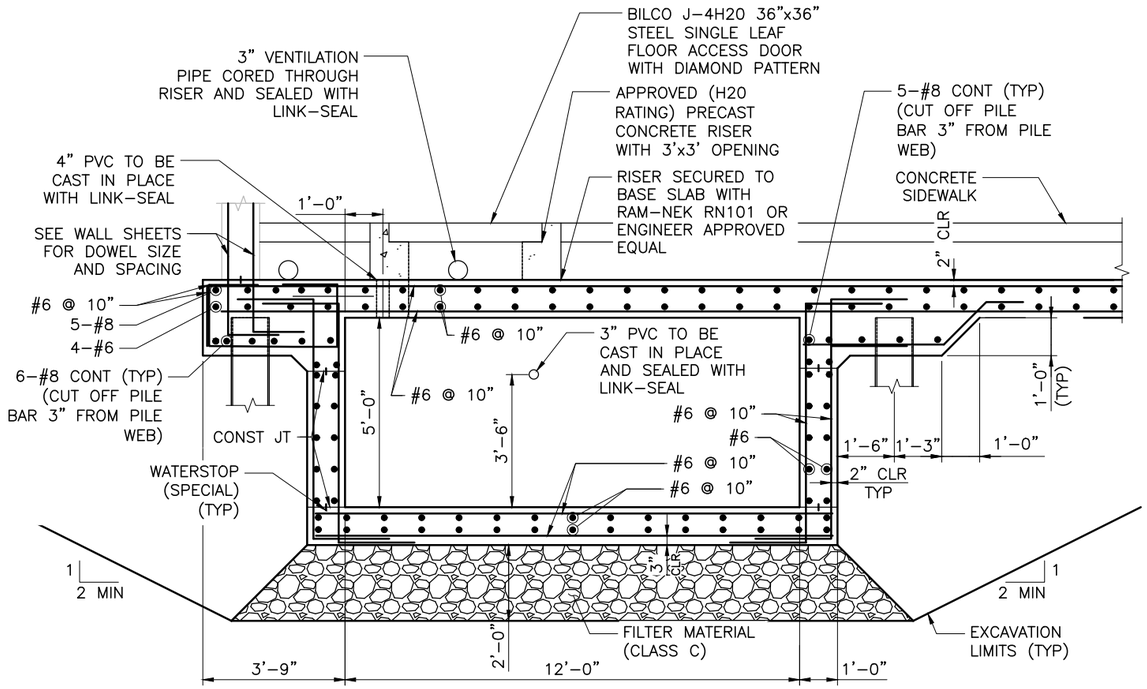
SECTION A / B10

(TRAIL STA 9+99.50 AND 10+81.93
TRAIL STA 12+60.65 AND 13+28.96)

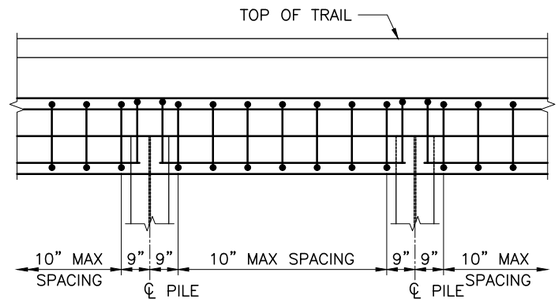


SECTION C / B10

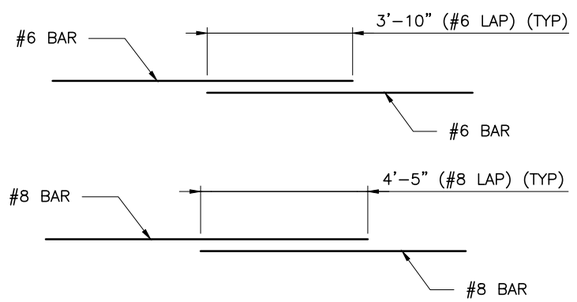
(TRAIL STA 10+81.93 AND 12+13.30)

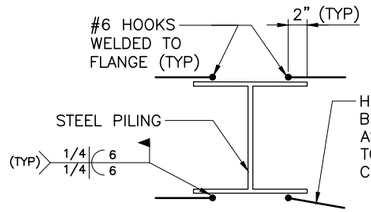


TYPICAL SECTION B / B10



SECTION D / —





BAR WELDED TO PILE DETAIL

NOTES:

1. CONCRETE CLASS D (SPECIAL) SHALL BE USED FOR THE BASE SLAB AND SUMP PUMP BASIN. XYPEX C-500 OR ENGINEER APPROVED WATERPROOFING ADMIXTURE SHALL BE ADDED TO CONCRETE CLASS D PER MANUFACTURE'S RECOMMENDATION.
2. WELDING OF REINFORCEMENT TO PILES WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
3. TOP 1'-6" OF PILING SHALL BE FREE OF DIRT, OIL AND DEBRIS PRIOR TO POURING BASE SLAB CONCRETE.
4. QUANTITIES FOR THE SUMP PUMP BASIN ARE INCLUDED IN THE BASE SLAB TABULATION.
5. LINK-SEAL SHALL BE USED AT ALL CAST-IN PIPES.
6. SEE SHEET B27 FOR WATERSTOP (SPECIAL) DETAILS.
7. SEE SHEETS C08 AND C09 FOR BASE SLAB DRAINAGE DETAILS.

DESCRIPTION	DATE
REVISION 1 REV_1	– DATE
REVISION 2 REV_2	– DATE
REVISION 3 REV_3	– DATE
REVISION 4 REV_4	– DATE

DRAWN BY	CWG	DATE	4.7.21
DESIGNED BY	CWG	DATE	4.7.21
CHECKED BY	MCF	DATE	4.7.21
APPROVED BY	ELK	DATE	4.7.21

SCALES: 1/4"=1'-0"
PLAN

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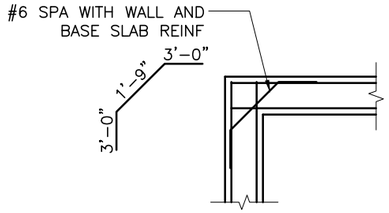
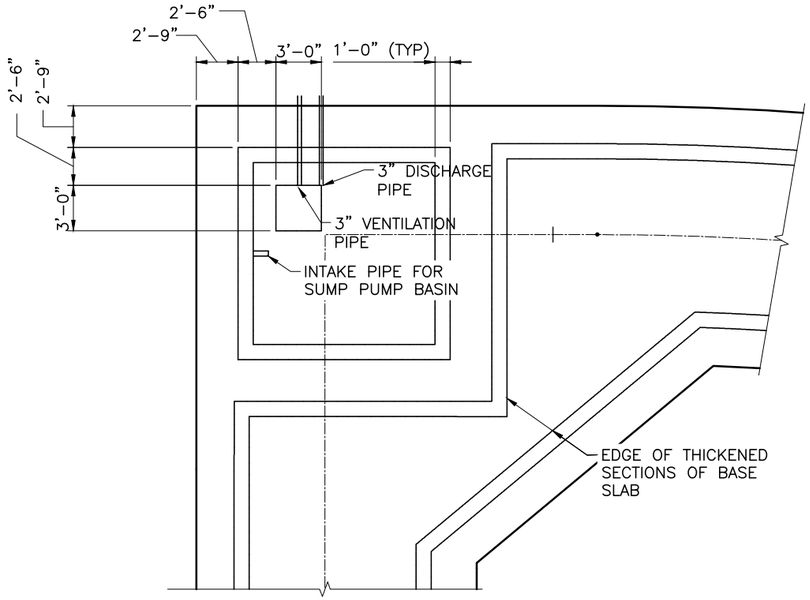
ENGINEERING DIVISION
PROJECT NO.SGM: 2020-385.001

G ROAD BRIDGE REPLACEMENT
BASE SLAB DETAILS (1)

B11
86



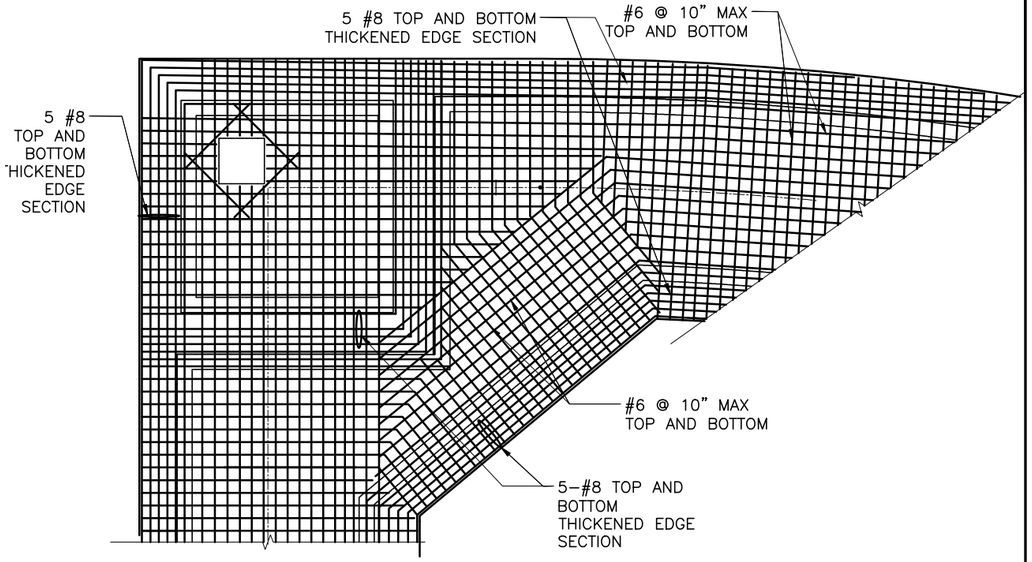
CORNER REINFORCING



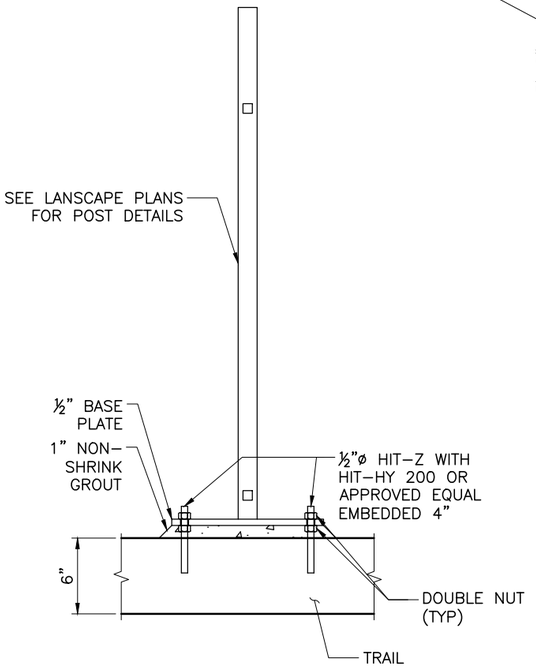
SUMP BASIN PLAN

NOTES:

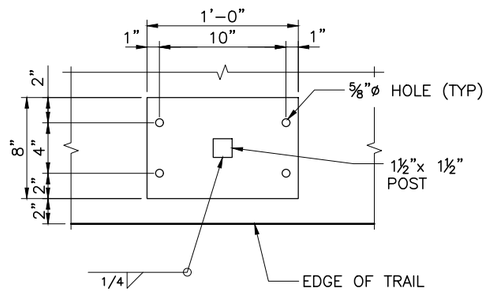
1. CONCRETE FOR TRAIL SHALL CONFORM TO CDOT STANDARD SPECIFICATIONS SECTION 608.
2. EXPANSION JOINTS IN TRAIL WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.



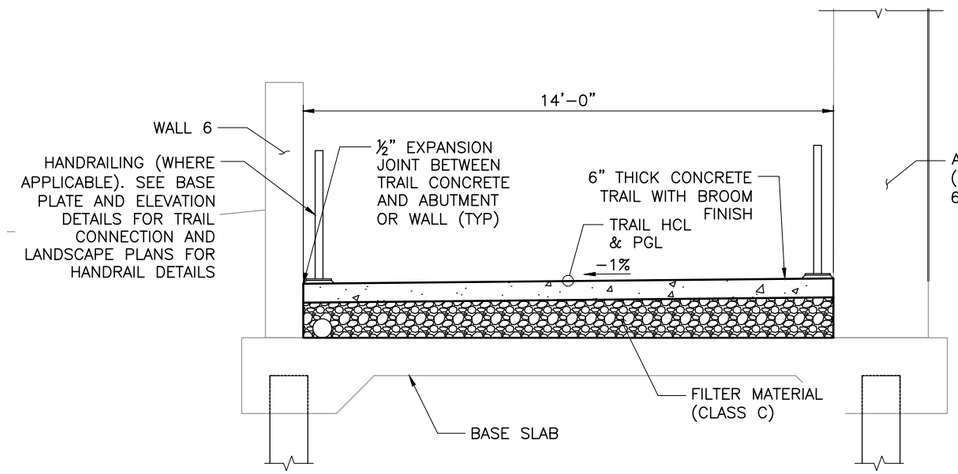
BASE SLAB CORNER REINFORCING PLAN



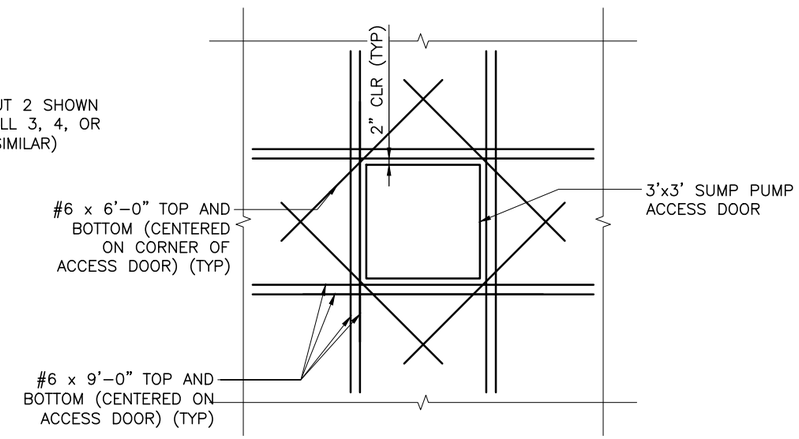
HAND RAIL ELEVATION



HAND RAIL BASE PLATE DETAIL



TYPICAL TRAIL DETAIL



ACCESS DOOR BLOCK OUT REINFORCING

DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

DRAWN BY CWG DATE 4.7.21
DESIGNED BY CWG DATE 4.7.21
CHECKED BY MCF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES: NTS
PLAN

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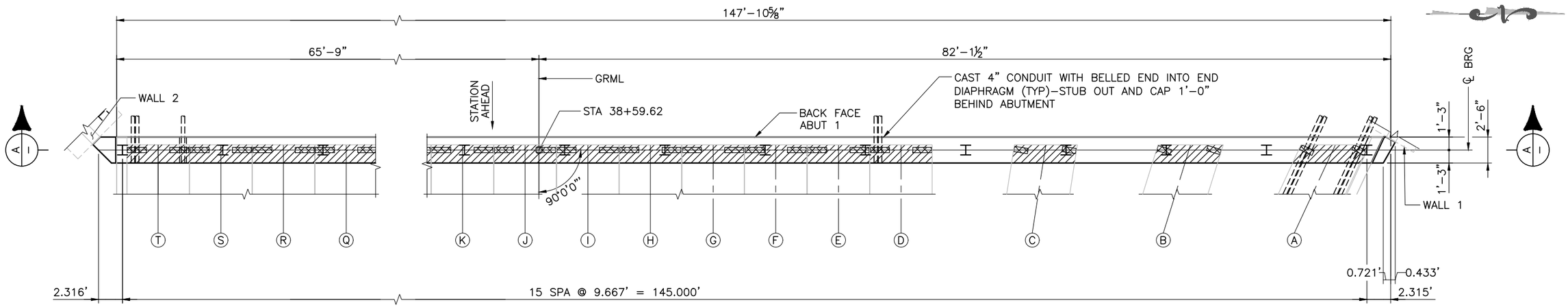
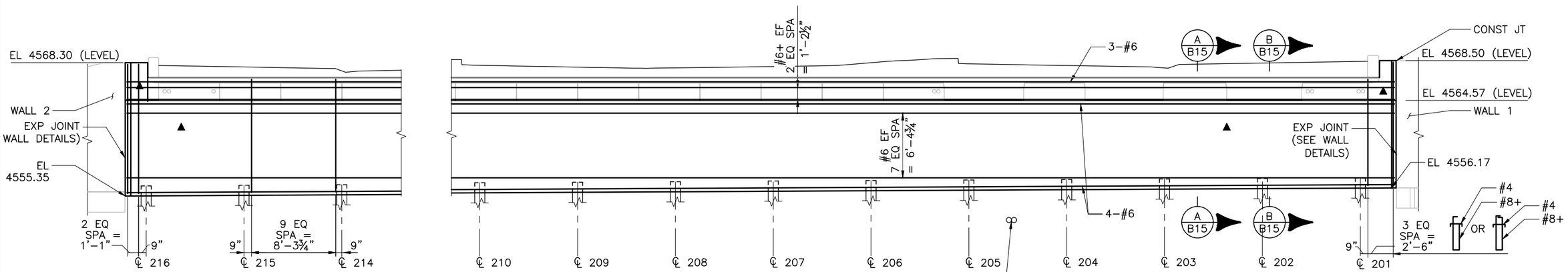
G ROAD BRIDGE REPLACEMENT
BASE SLAB DETAILS (2)

B12
87



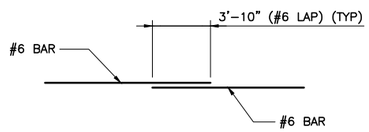
PLAN



SECTION A–

2–6" DIA. CONDUITS BORED UNDER BRIDGE A MINIMUM OF 3' BELOW THE ABUTMENT AFTER PILING INSTALLED (TO BE CONSTRUCTED BY GRAND VALLEY POWER)

▲ LIMITS OF STRUCTURAL CONCRETE COATING AND ANTI–GRAFFITI COATING



NOTES:

1. CONCRETE CLASS D SHALL BE USED FOR ABUTMENT 1. ABUTMENT DIAPHRAGM CONCRETE SHALL BE PLACED MONOLITHICALLY WITH DECK CONCRETE.
2. SEAT ELEVATIONS ARE TAKEN AT THE INTERSECTION OF ℄ BRG AND ℄ GIRDER.
3. TOP 1'–6" OF PILING SHALL BE FREE OF DIRT, OIL AND DEBRIS PRIOR TO POURING ABUTMENT CONCRETE.
4. ELASTOMERIC LEVELING PAD AND POLYSTYRENE FILLER WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.

DESCRIPTION	DATE
REVISION 1 REV 1	– DATE
REVISION 2 REV 2	– DATE
REVISION 3 REV 3	– DATE
REVISION 4 REV 4	– DATE

DRAWN BY CWG DATE 3.8.21
DESIGNED BY CWG DATE 3.8.21
CHECKED BY MCF DATE 3.8.21
APPROVED BY XXX DATE XX.XX.21

SCALES: PLAN 0 2.5 5 10

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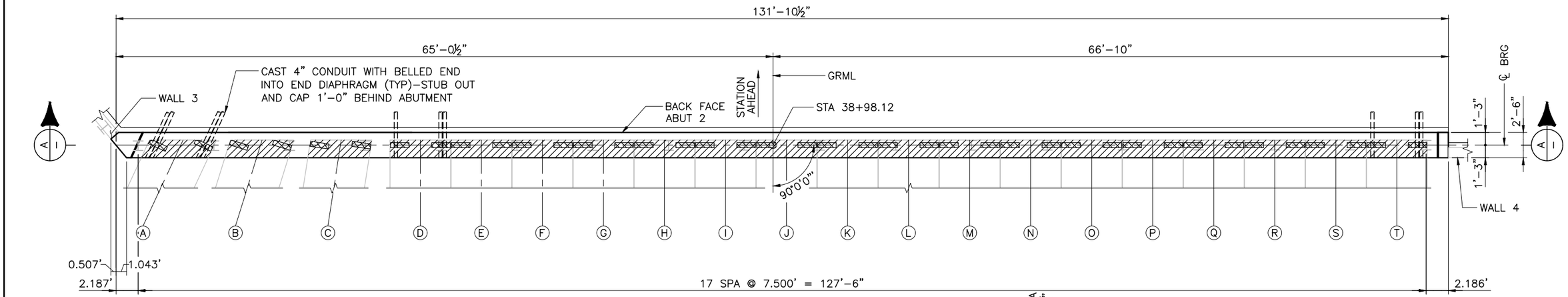
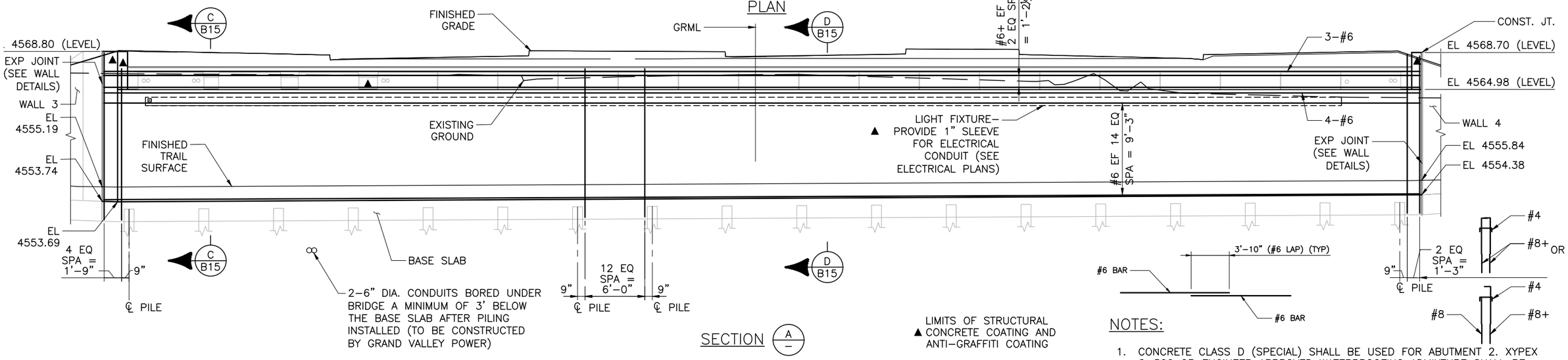
G ROAD BRIDGE REPLACEMENT
ABUTMENT 1 PLAN & ELEVATION

B13
88



PLAN



SECTION A

▲ LIMITS OF STRUCTURAL CONCRETE COATING AND ANTI–GRAFFITI COATING

NOTES:

1. CONCRETE CLASS D (SPECIAL) SHALL BE USED FOR ABUTMENT 2. XYPEX C–500 OR ENGINEER APPROVED WATERPROOFING ADMIXTURE SHALL BE ADDED TO CONCRETE CLASS D PER MANUFACTURE'S RECOMMENDATION.
2. CONCRETE CLASS D SHALL BE USED FOR THE DIAPHRAGM. DIAPHRAGM CONCRETE SHALL BE PLACED MONOLITHICALLY WITH DECK CONCRETE.
3. SEAT ELEVATIONS ARE TAKEN AT THE INTERSECTION OF ℄ BRG AND ℄ GIRDER.
4. TOP 1'–6" OF PILING SHALL BE FREE OF DIRT, OIL AND DEBRIS PRIOR TO POURING ABUTMENT CONCRETE.
5. ELASTOMERIC LEVELING PAD AND POLYSTYRENE FILLER WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
6. SLEEVE FOR ELECTRICAL CONDUIT WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.

DESCRIPTION	DATE
REVISION ⚠ REV 1	– DATE
REVISION ⚠ REV 2	– DATE
REVISION ⚠ REV 3	– DATE
REVISION ⚠ REV 4	– DATE

DRAWN BY CWG DATE 4.7.21
DESIGNED BY CWG DATE 4.7.21
CHECKED BY MCF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES: PLAN 0 2.5 5 10

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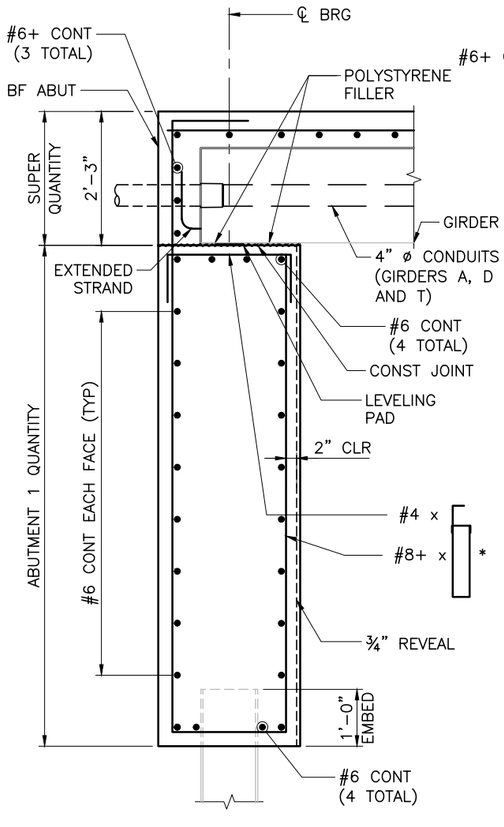
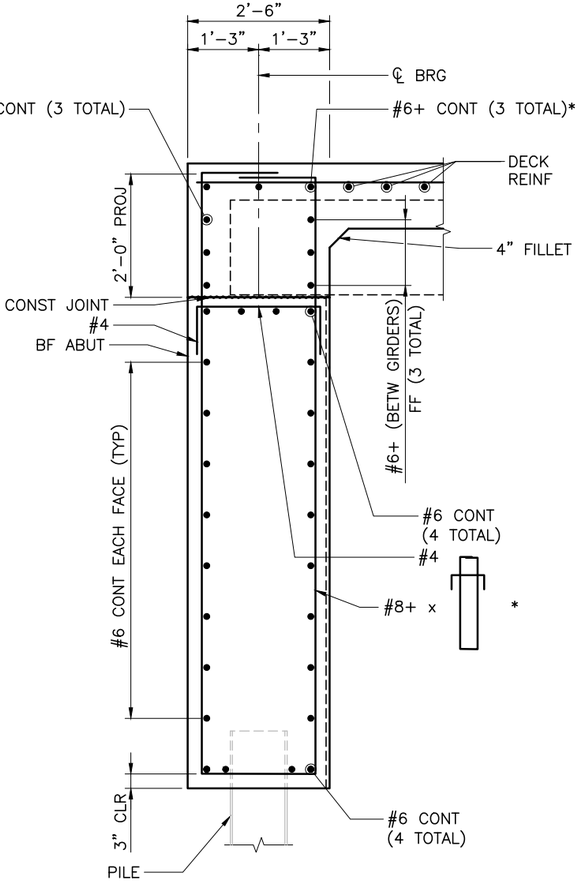
G ROAD BRIDGE REPLACEMENT
ABUTMENT 2 PLAN & ELEVATION

B14
89

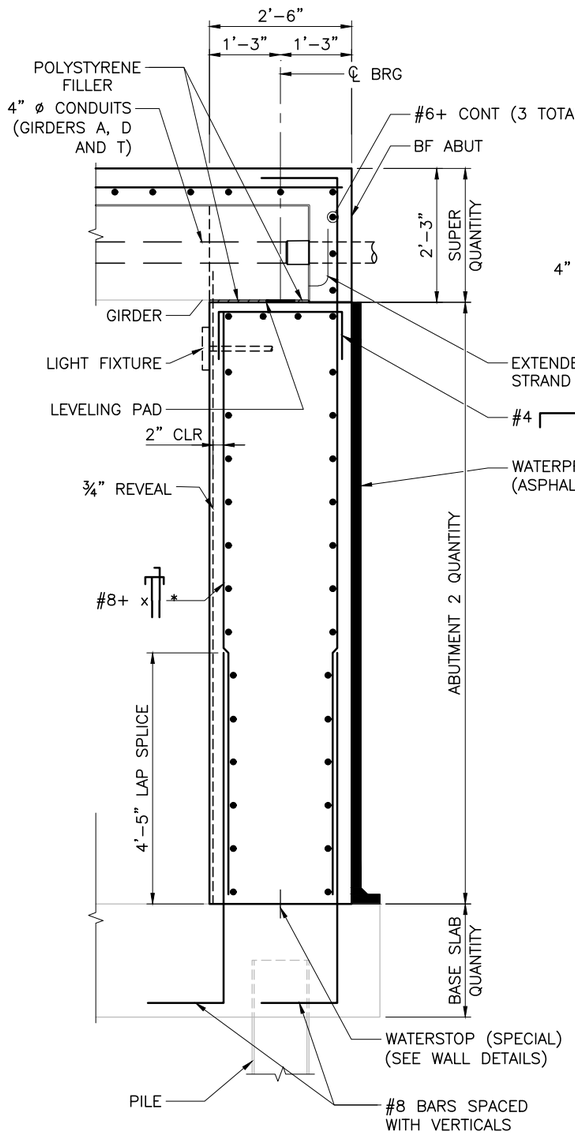


A/13 TYPICAL SECTION
ABUTMENT 1 AT GIRDERS

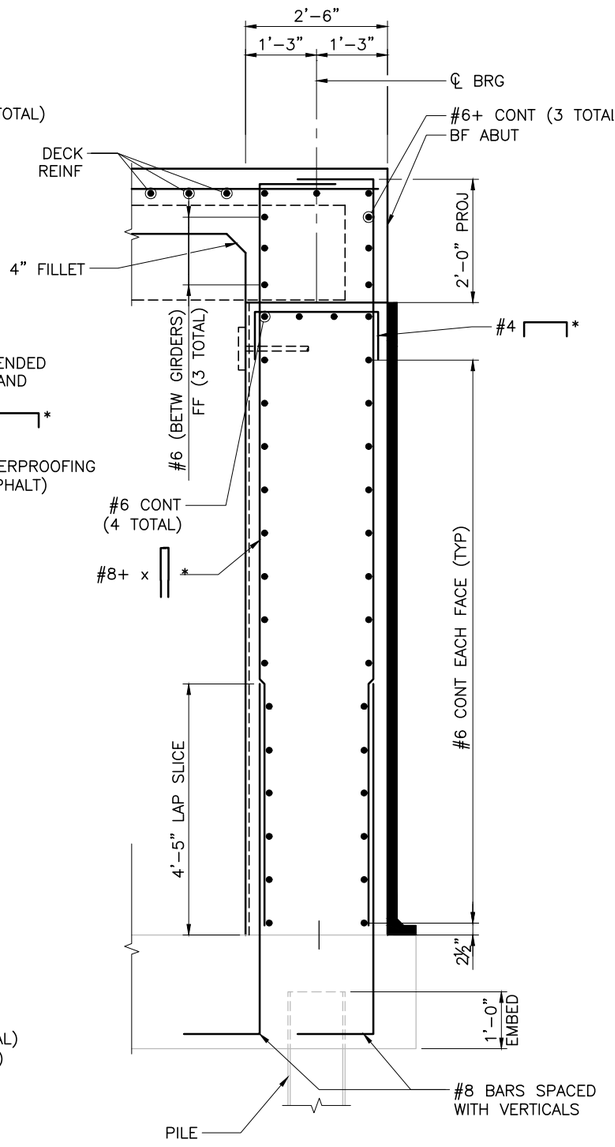


B/13 TYPICAL SECTION
ABUTMENT 1 BETWEEN GIRDERS

* SEE ABUTMENT ELEVATIONS FOR SPACING



D/14 TYPICAL SECTION
ABUTMENT 2 AT GIRDERS



C/14 TYPICAL SECTION
ABUTMENT 2 BETWEEN GIRDERS

NOTES:

1. FIELD CUT HORIZONTAL BARS AS NECESSARY TO CLEAR GIRDERS IN TAPERED GIRDER SECTION.
2. ABUTMENT WALL EXPANSION JOINTS SHALL BE LOCATED AT 88' MAXIMUM ON CENTER. WEAKENED PLANES SHALL BE LOCATED AT 22' MAXIMUM ON CENTER. SEE WALL DETAILS.
3. PAYMENT FOR CONDUITS IN ABUTMENTS SHALL BE INCLUDED IN THE WORK AND WILL NOT BE PAID FOR SEPARATELY.
4. LIGHT FIXTURE CONNECTION DETAILS TO BE COORDINATED WITH MANUFACTURER AND SUBMITTED TO THE ENGINEER FOR APPROVAL.

DESCRIPTION	DATE
REVISION ⚠1 REV_1	– DATE
REVISION ⚠2 REV_2	– DATE
REVISION ⚠3 REV_3	– DATE
REVISION ⚠4 REV_4	– DATE

DRAWN BY CWG DATE 4.7.21
DESIGNED BY CWG DATE 4.7.21
CHECKED BY MCF DATE 4.7.21
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SCALES: 3/8" = 1'–0"

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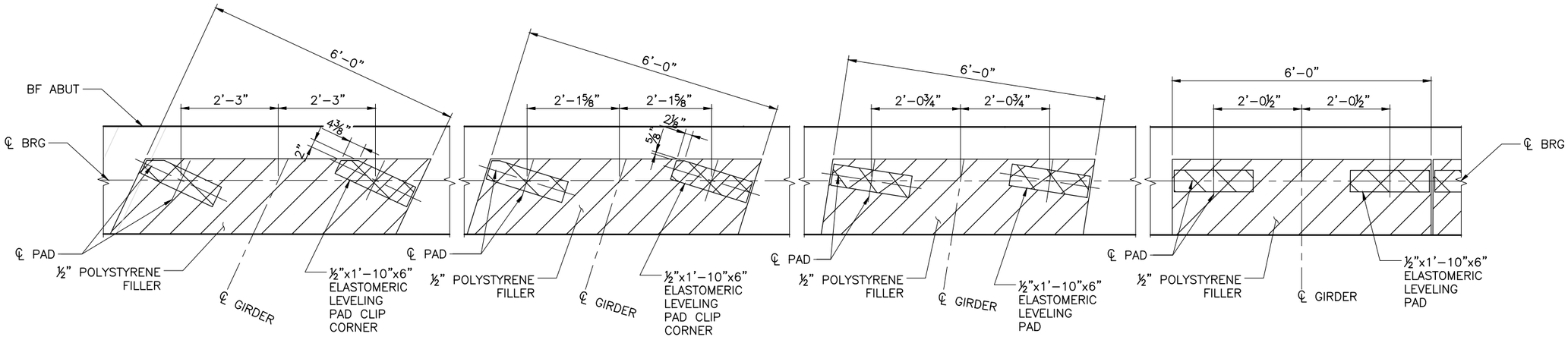
G ROAD BRIDGE REPLACEMENT
ABUTMENT DETAILS (1)

B15
90



BEARING SEAT DETAIL GIRDER A

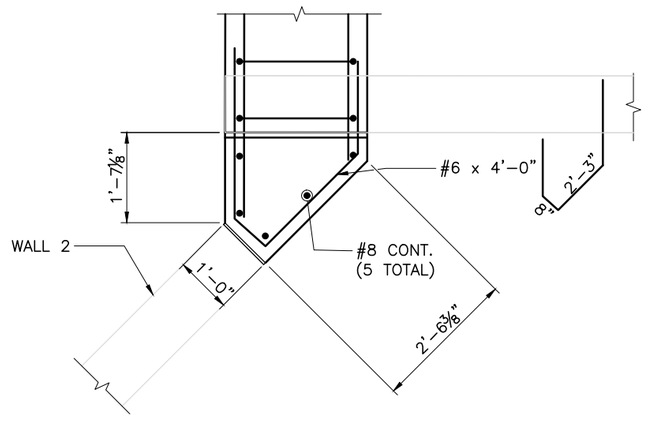
BEARING SEAT DETAIL GIRDER B

BEARING SEAT DETAIL GIRDER C

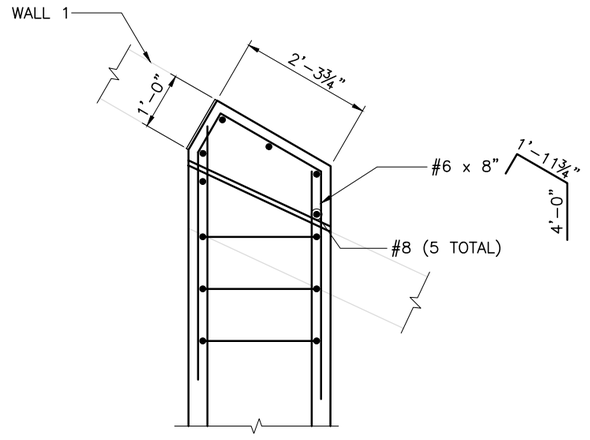
BEARING SEAT DETAIL GIRDER D–T

NOTES:

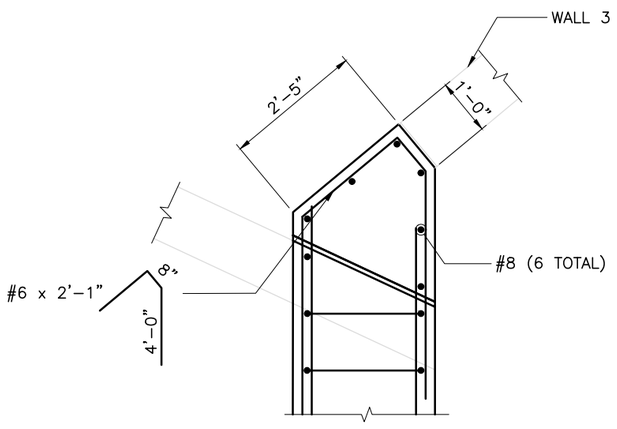
1. POLYSTYRENE FILLER SHALL BE ADHERED TO BEARING SEAT PRIOR TO SETTING GIRDER.
2. STEEL SHIM PLATES AS REQUIRED TO PREVENT ROCKING OF GIRDERS.



SOUTH CORNER OF ABUTMENT 1



NORTH CORNER OF ABUTMENT 1 BELOW HEADWALL



NORTH CORNER OF ABUTMENT 2

DESCRIPTION	DATE
REVISION ⚠ REV 1	– DATE
REVISION ⚠ REV 2	– DATE
REVISION ⚠ REV 3	– DATE
REVISION ⚠ REV 4	– DATE

DRAWN BY	CWG	DATE	4.7.21
DESIGNED BY	CWG	DATE	4.7.21
CHECKED BY	MCF	DATE	4.7.21
APPROVED BY	ELK	DATE	4.7.21

SCALES: 3/8" = 1'–0"

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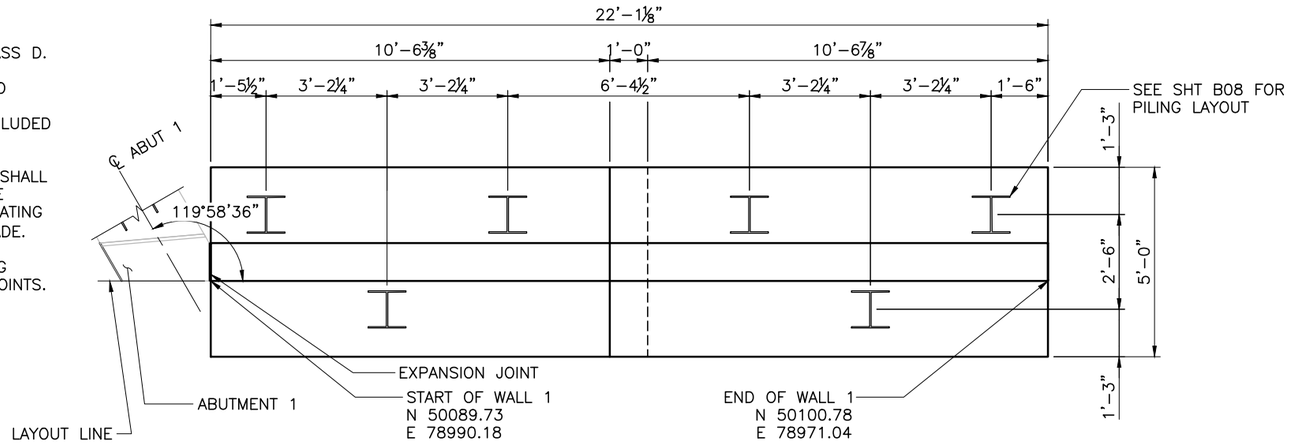
PROJECT NO.SGM: 2020–385.001

G ROAD BRIDGE REPLACEMENT
ABUTMENT DETAILS (2)

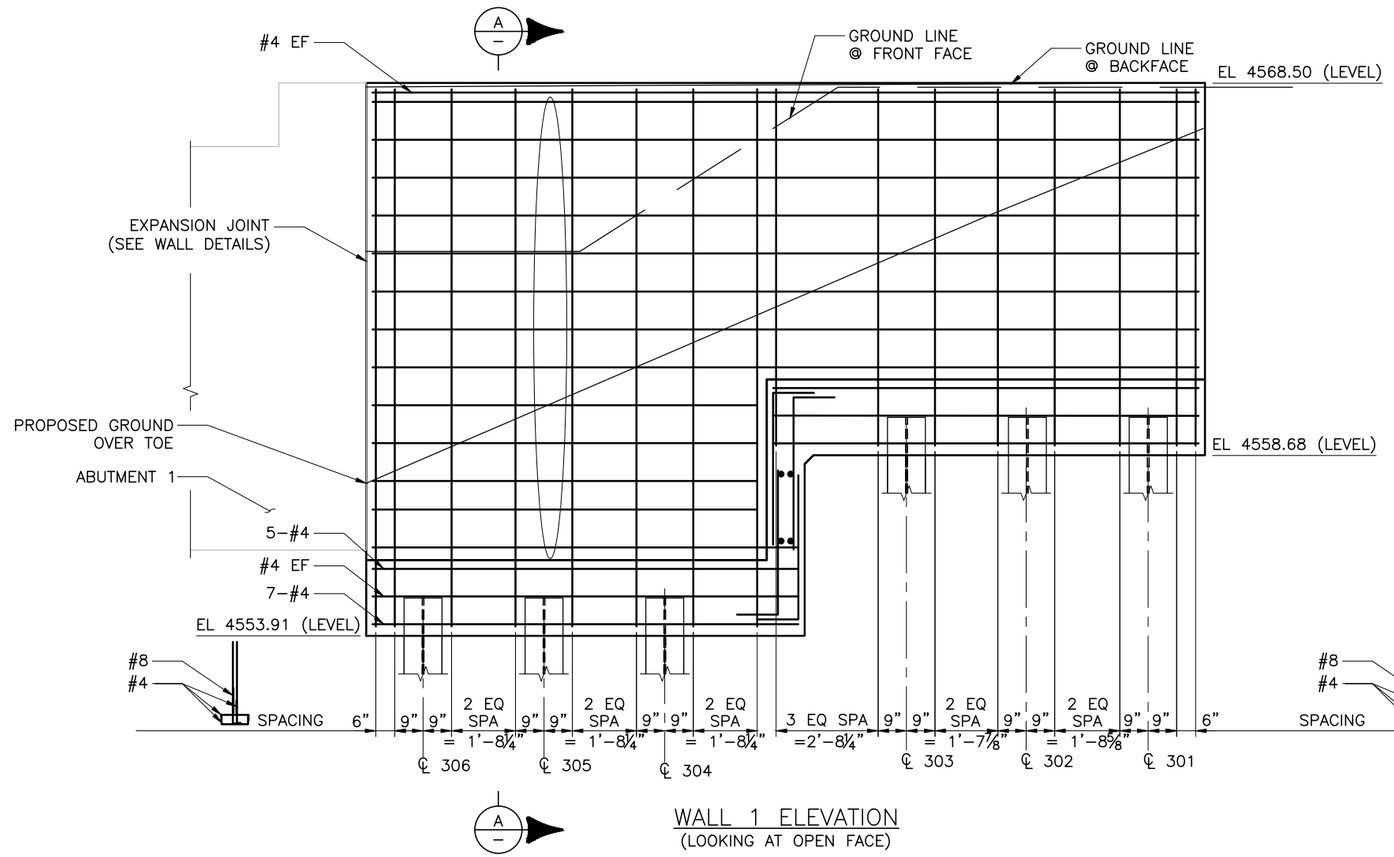
B16
91

NOTES:

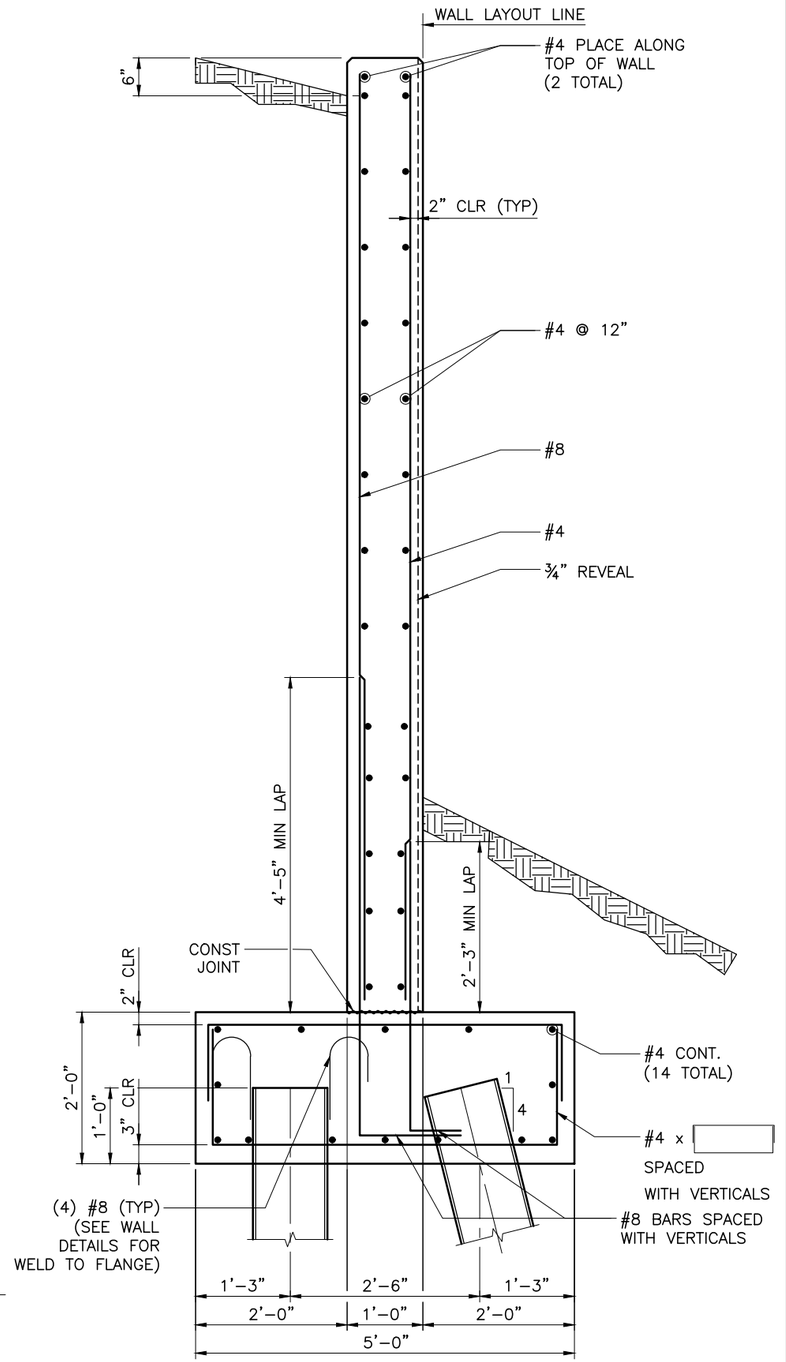
1. CONCRETE SHALL BE CDOT CLASS D.
2. WELDING OF REINFORCEMENT TO PILES WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK
3. ALL EXPOSED FACES OF WALL SHALL RECEIVE STRUCTURAL CONCRETE COATING AND ANTI-GRAFFITI COATING TO 1'-0" BELOW FINISHED GRADE.
4. SEE WALL DETAILS FOR FOOTING STEP DETAIL AND EXPANSION JOINTS.



WALL 1 PLAN



WALL 1 ELEVATION
(LOOKING AT OPEN FACE)



SECTION A

DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

DRAWN BY MCF DATE 4.7.21
DESIGNED BY MCF DATE 4.7.21
CHECKED BY MDF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES: 1/4"=1'-0"
SECTION: 1/2"=1'-0"

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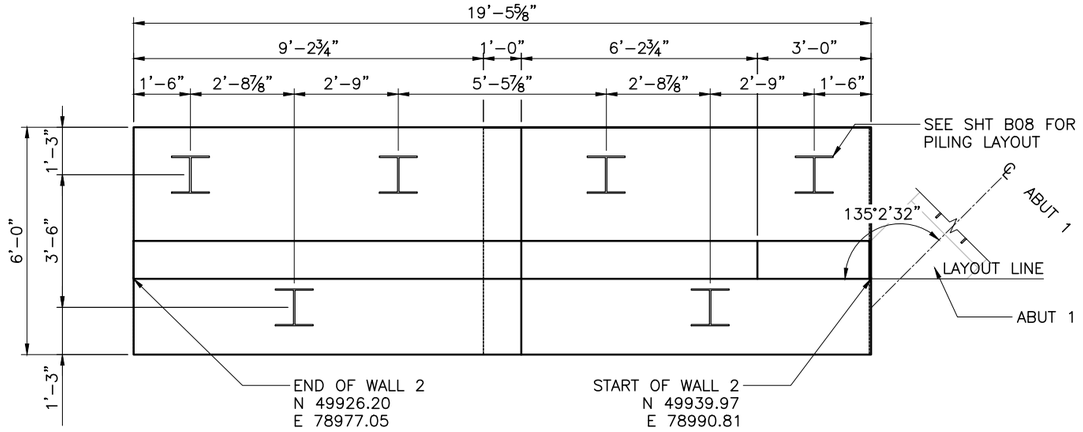
G ROAD BRIDGE REPLACEMENT
WALL 1 PLAN & ELEVATION

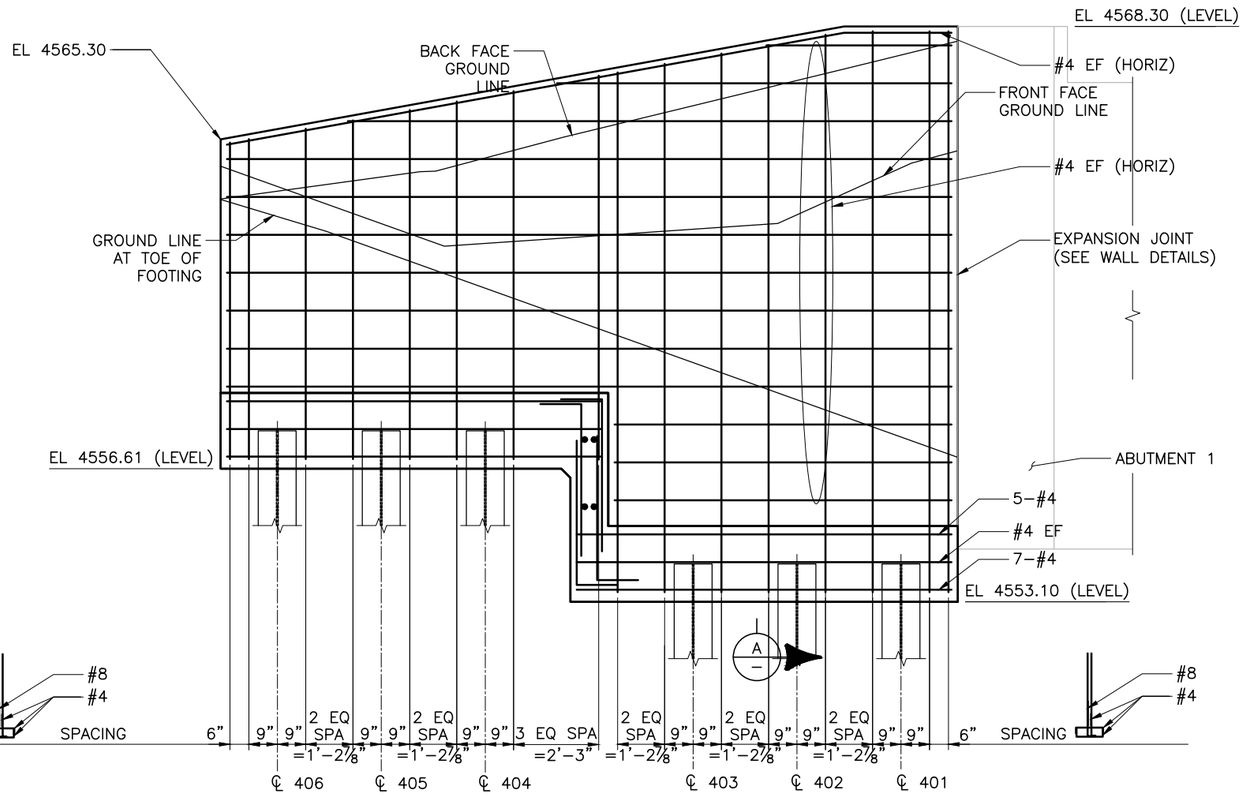
B17
92



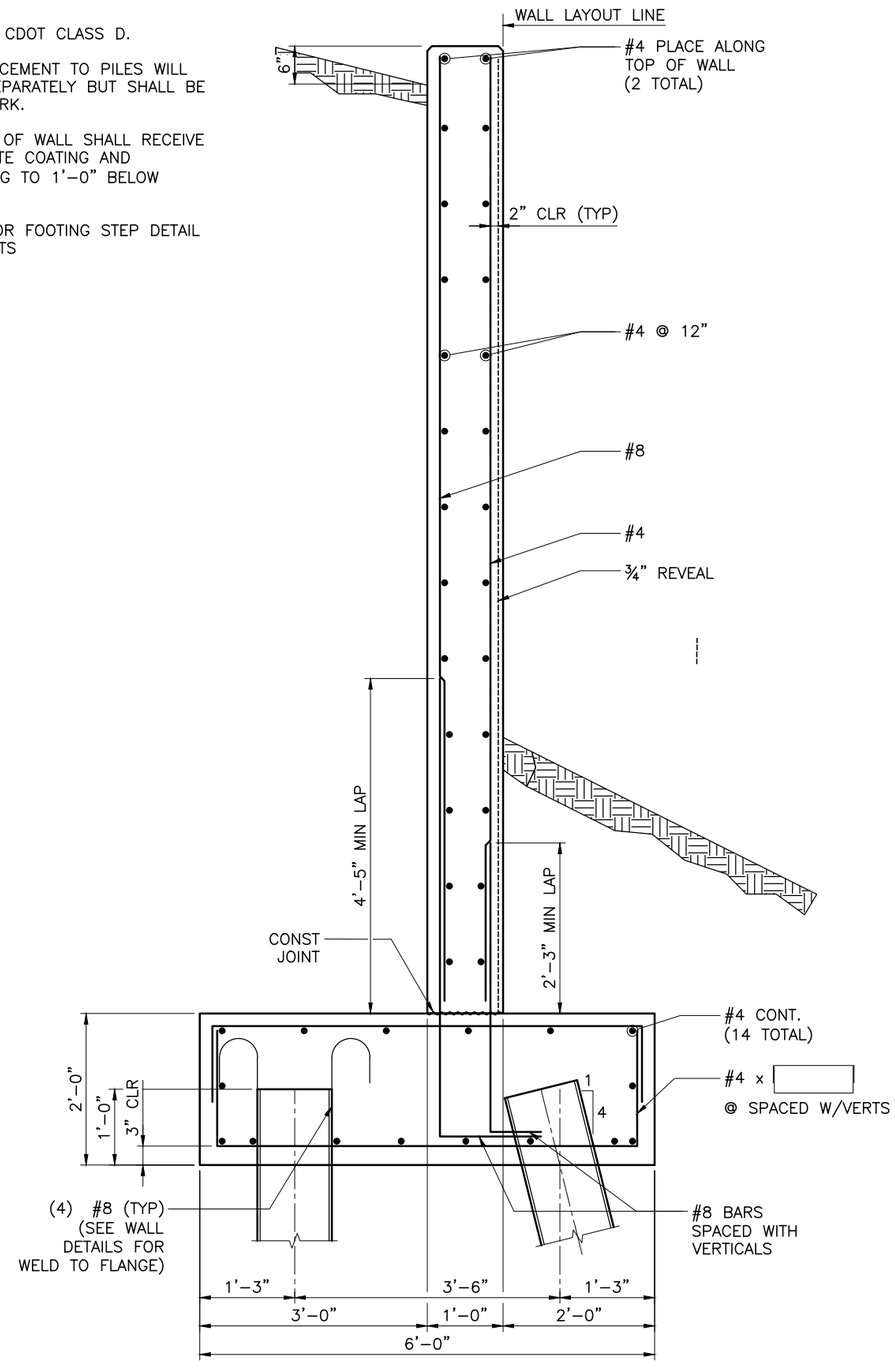
WALL 2 PLAN

NOTES:

1. CONCRETE SHALL BE CDOT CLASS D.
2. WELDING OF REINFORCEMENT TO PILES WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
3. ALL EXPOSED FACES OF WALL SHALL RECEIVE STRUCTURAL CONCRETE COATING AND ANTI-GRAFFITI COATING TO 1'-0" BELOW FINISHED GRADE.
4. SEE WALL DETAILS FOR FOOTING STEP DETAIL AND EXPANSION JOINTS



WALL 2 ELEVATION
(LOOKING AT OPEN FACE)



SECTION A

DESCRIPTION	DATE
REVISION ⚠1 REV 1	– DATE
REVISION ⚠2 REV 2	– DATE
REVISION ⚠3 REV 3	– DATE
REVISION ⚠4 REV 4	– DATE

DRAWN BY	CWG	DATE	4.7.21
DESIGNED BY	CWG	DATE	4.7.21
CHECKED BY	MCF	DATE	4.7.21
APPROVED BY	ELK	DATE	4.7.21

SCALES: 1/4"=1'-0" PLAN & ELEV, 1/2"=1'-0" SECTION

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G ROAD BRIDGE REPLACEMENT
WALL 2 PLAN & ELEVATION

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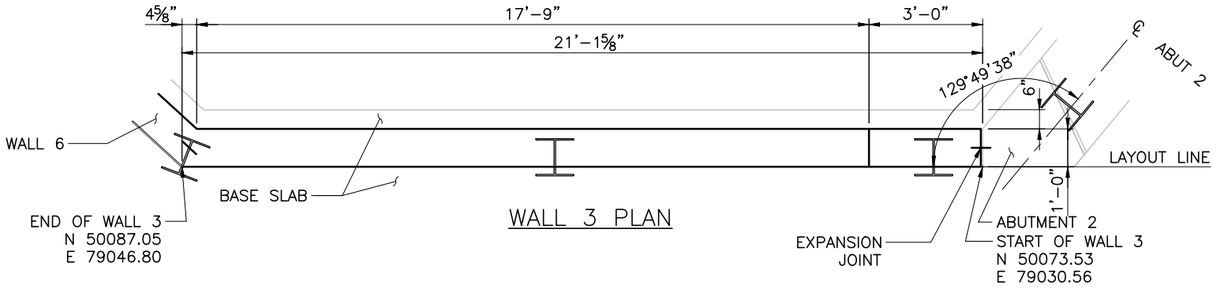
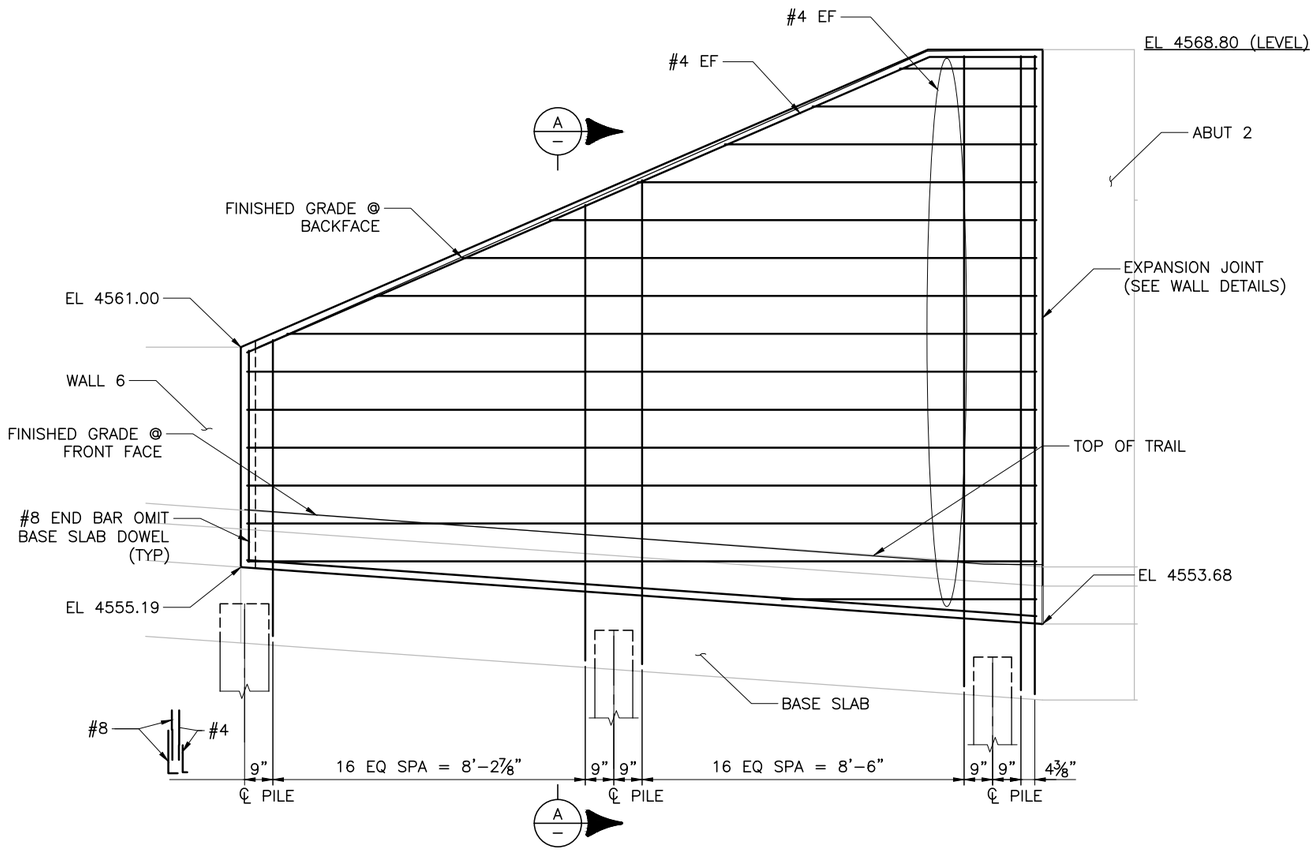
93



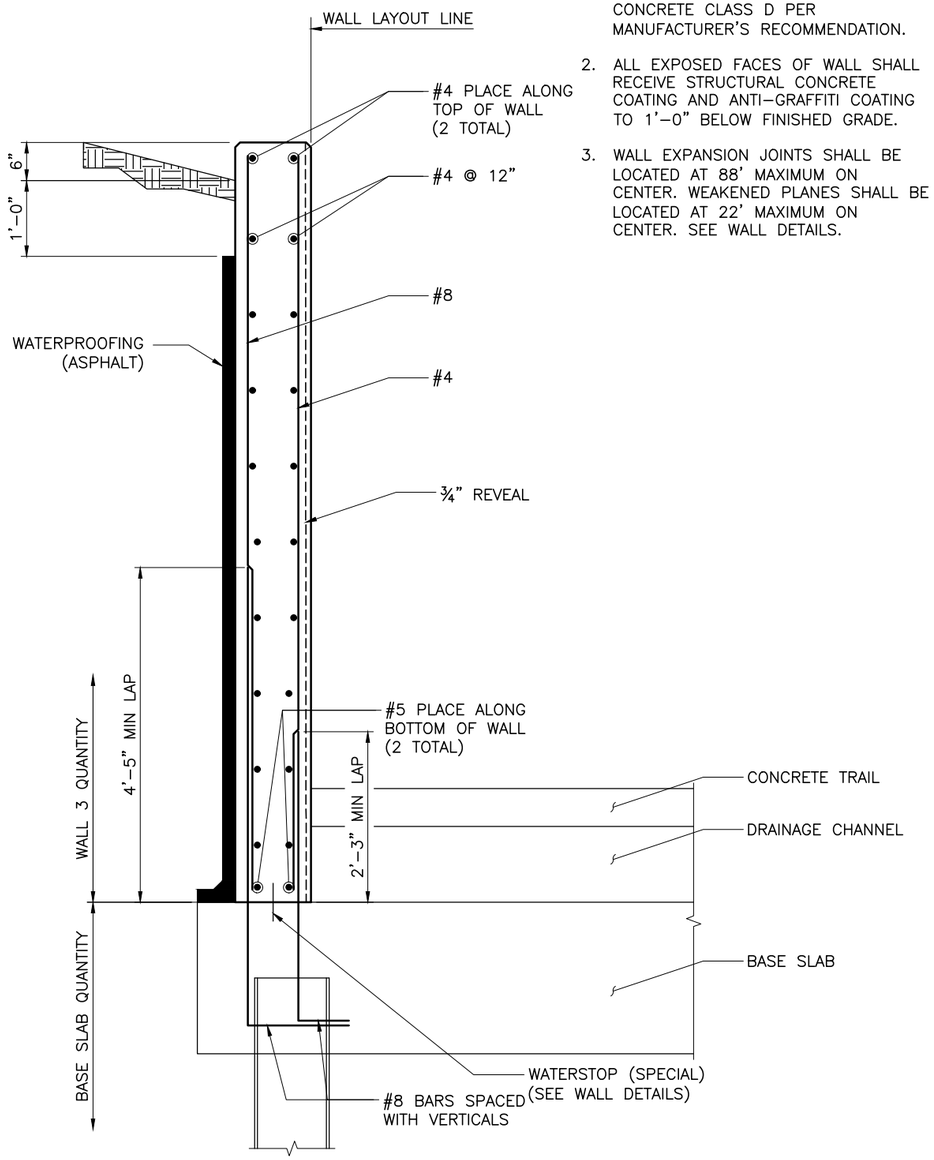
WALL 3 PLAN



WALL 3 ELEVATION

NOTES:

1. CONCRETE CLASS D (SPECIAL) SHALL BE USED. XYPEX C-500 OR ENGINEER APPROVED WATERPROOFING ADMIXTURE SHALL BE ADDED TO CONCRETE CLASS D PER MANUFACTURER'S RECOMMENDATION.
2. ALL EXPOSED FACES OF WALL SHALL RECEIVE STRUCTURAL CONCRETE COATING AND ANTI-GRAFFITI COATING TO 1'-0" BELOW FINISHED GRADE.
3. WALL EXPANSION JOINTS SHALL BE LOCATED AT 88' MAXIMUM ON CENTER. WEAKENED PLANES SHALL BE LOCATED AT 22' MAXIMUM ON CENTER. SEE WALL DETAILS.



SECTION A

DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

DRAWN BY	CWG	DATE	4.7.21
DESIGNED BY	CWG	DATE	4.7.21
CHECKED BY	MCF	DATE	4.7.21
APPROVED BY	ELK	DATE	4.7.21

SCALES: 1/4"=1'-0" PLAN & ELEV, 1/2"=1'-0" SECTION

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G ROAD BRIDGE REPLACEMENT
WALL 3 PLAN & ELEVATION

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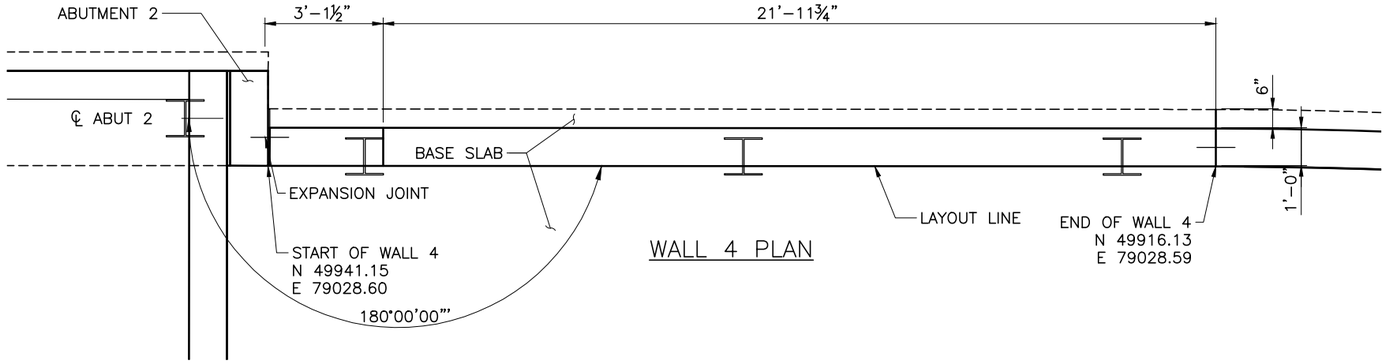
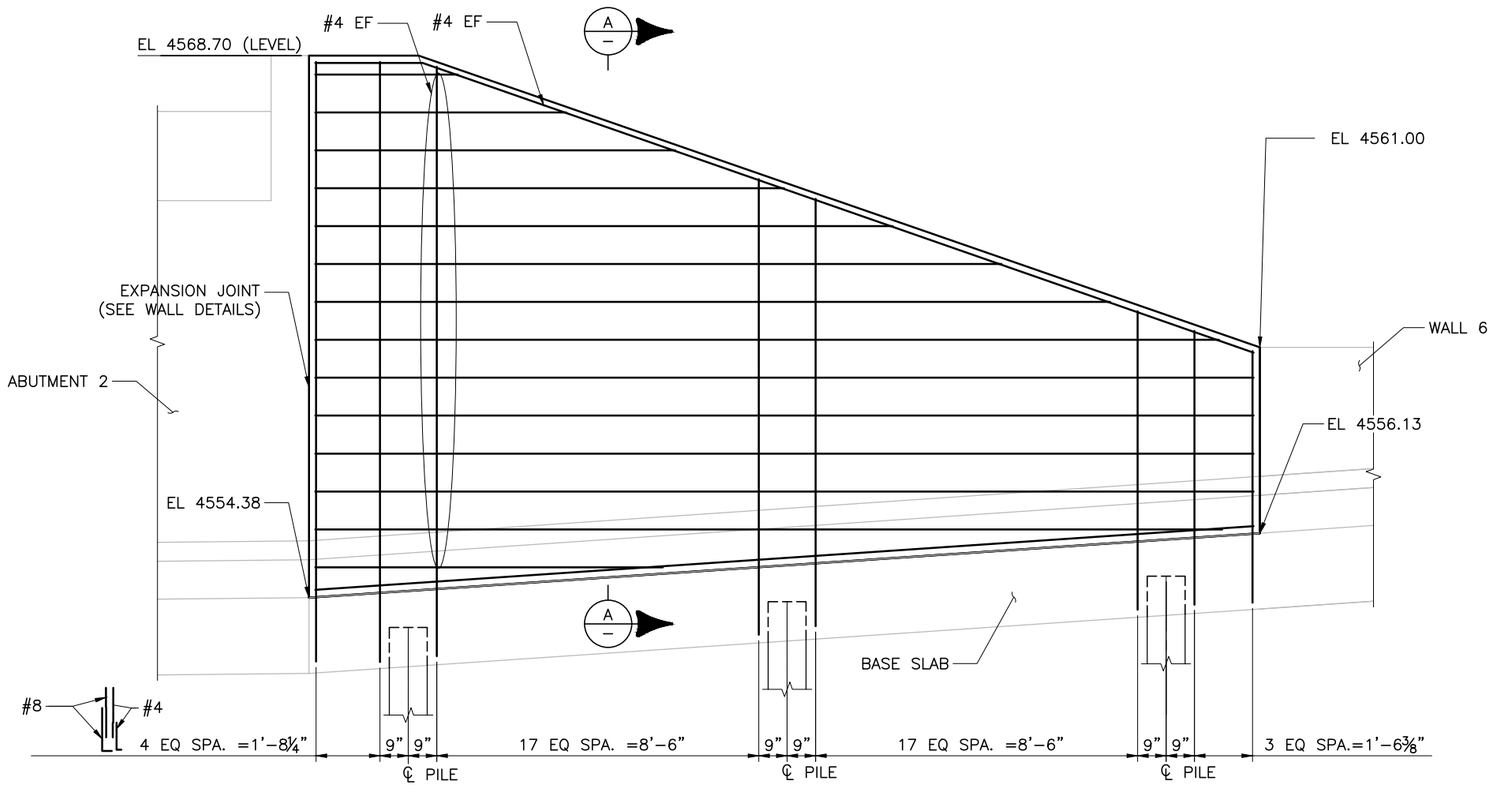
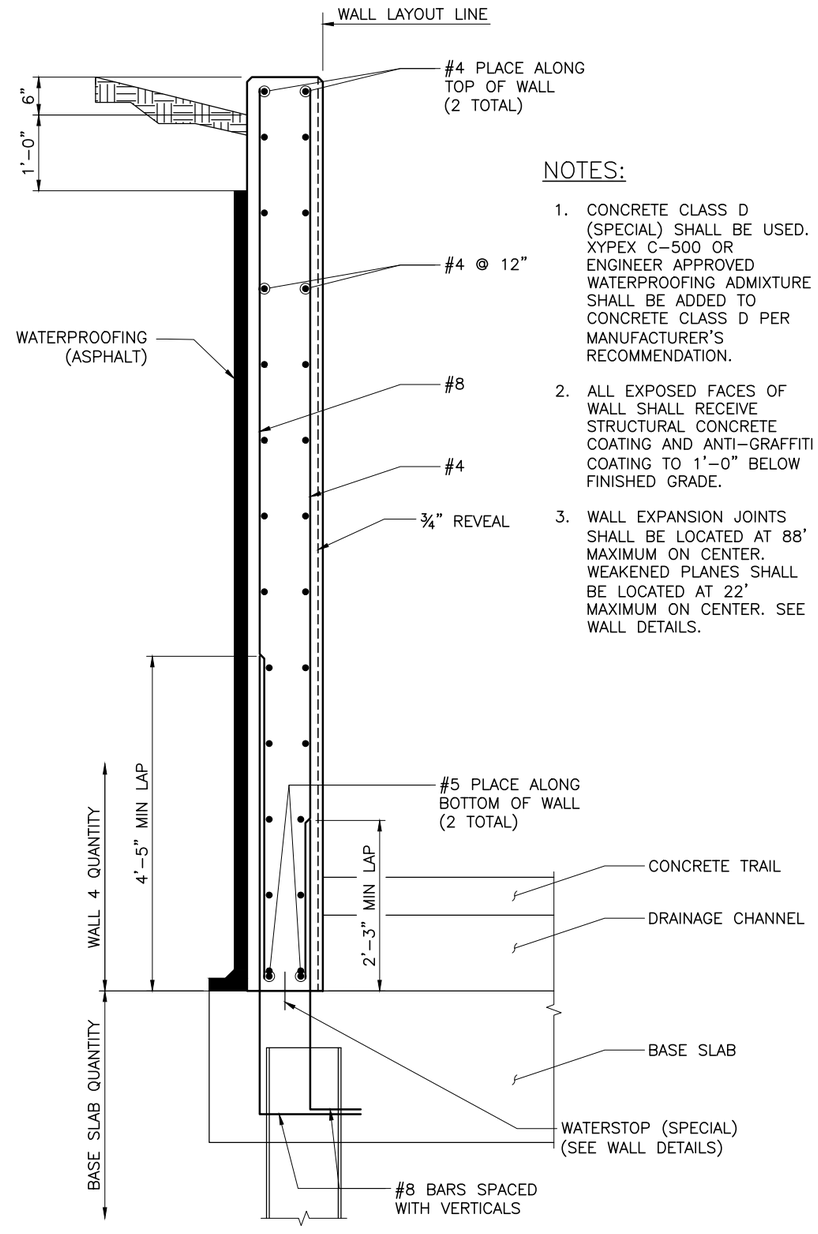
94



WALL 4 PLAN



WALL 4 ELEVATION



SECTION A

NOTES:

1. CONCRETE CLASS D (SPECIAL) SHALL BE USED. XYPEX C–500 OR ENGINEER APPROVED WATERPROOFING ADMIXTURE SHALL BE ADDED TO CONCRETE CLASS D PER MANUFACTURER'S RECOMMENDATION.
2. ALL EXPOSED FACES OF WALL SHALL RECEIVE STRUCTURAL CONCRETE COATING AND ANTI–GRAFFITI COATING TO 1'–0" BELOW FINISHED GRADE.
3. WALL EXPANSION JOINTS SHALL BE LOCATED AT 88' MAXIMUM ON CENTER. WEAKENED PLANES SHALL BE LOCATED AT 22' MAXIMUM ON CENTER. SEE WALL DETAILS.

DESCRIPTION	DATE
REVISION 1 REV 1	– DATE
REVISION 2 REV 2	– DATE
REVISION 3 REV 3	– DATE
REVISION 4 REV 4	– DATE

DRAWN BY CWG DATE 4.7.21
DESIGNED BY CWG DATE 4.7.21
CHECKED BY MCF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES: 1/4"=1'–0" PLAN & ELEV, 1/2"=1'–0" SECTION

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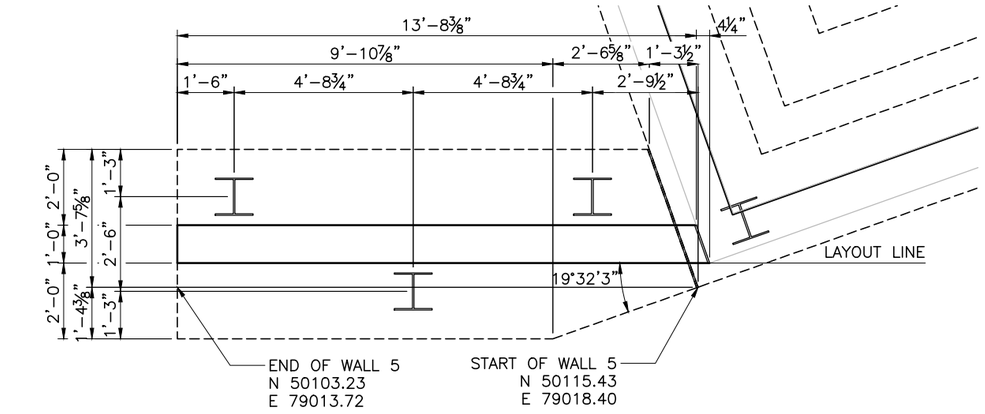
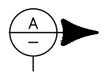
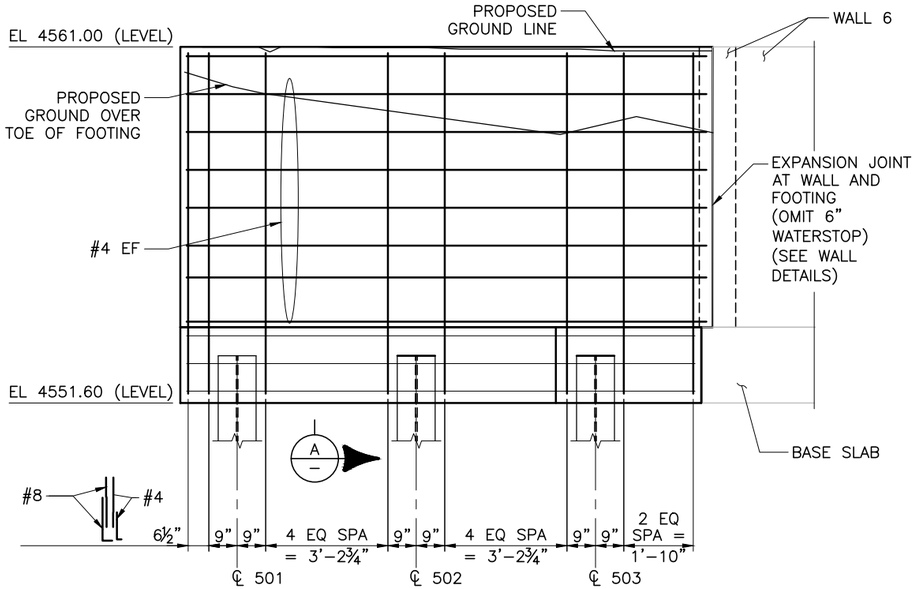
G ROAD BRIDGE REPLACEMENT
WALL 4 PLAN & ELEVATION

B20
95



WALL 5 PLAN



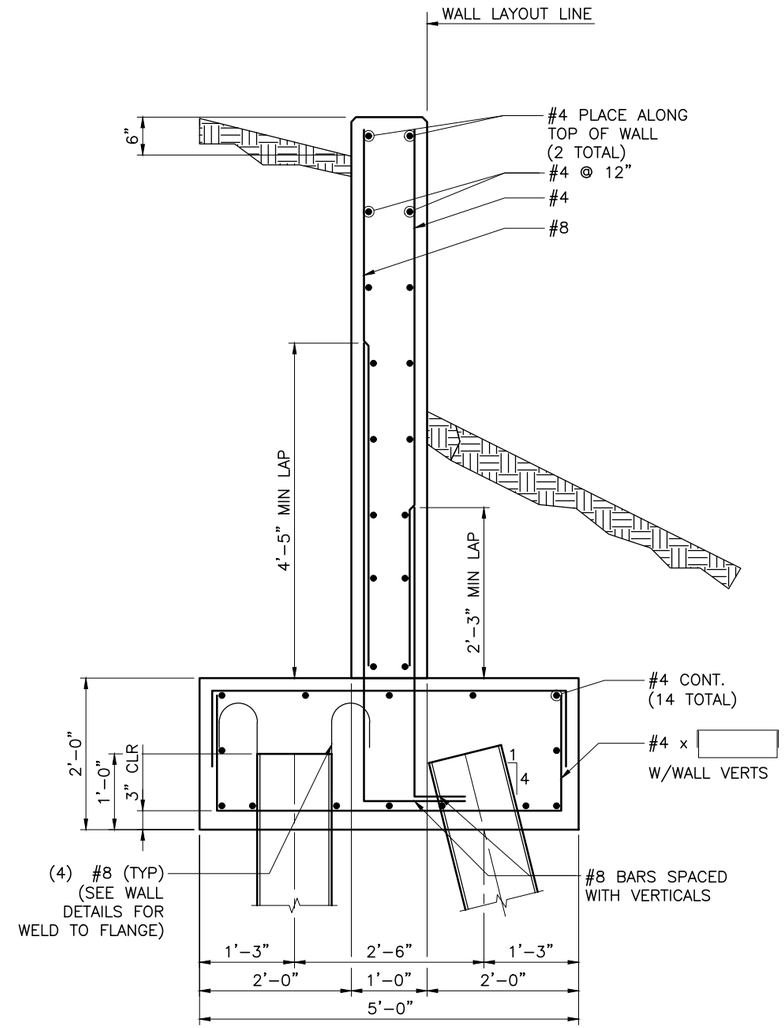


WALL 5 ELEVATION

(LOOKING AT OPEN FACE)

NOTES:

1. CONCRETE SHALL BE CDOT CLASS D
2. WELDING OF REINFORCEMENT TO PILES WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK



SECTION A

DESCRIPTION	DATE
REVISION 1 REV 1	– DATE
REVISION 2 REV 2	– DATE
REVISION 3 REV 3	– DATE
REVISION 4 REV 4	– DATE

DRAWN BY	CWG	DATE	4.7.21
DESIGNED BY	CWG	DATE	4.7.21
CHECKED BY	MCF	DATE	4.7.21
APPROVED BY	ELK	DATE	4.7.21

SCALES: 1/4"=1'-0" PLAN & ELEV, 1/2"=1'-0" SECTION

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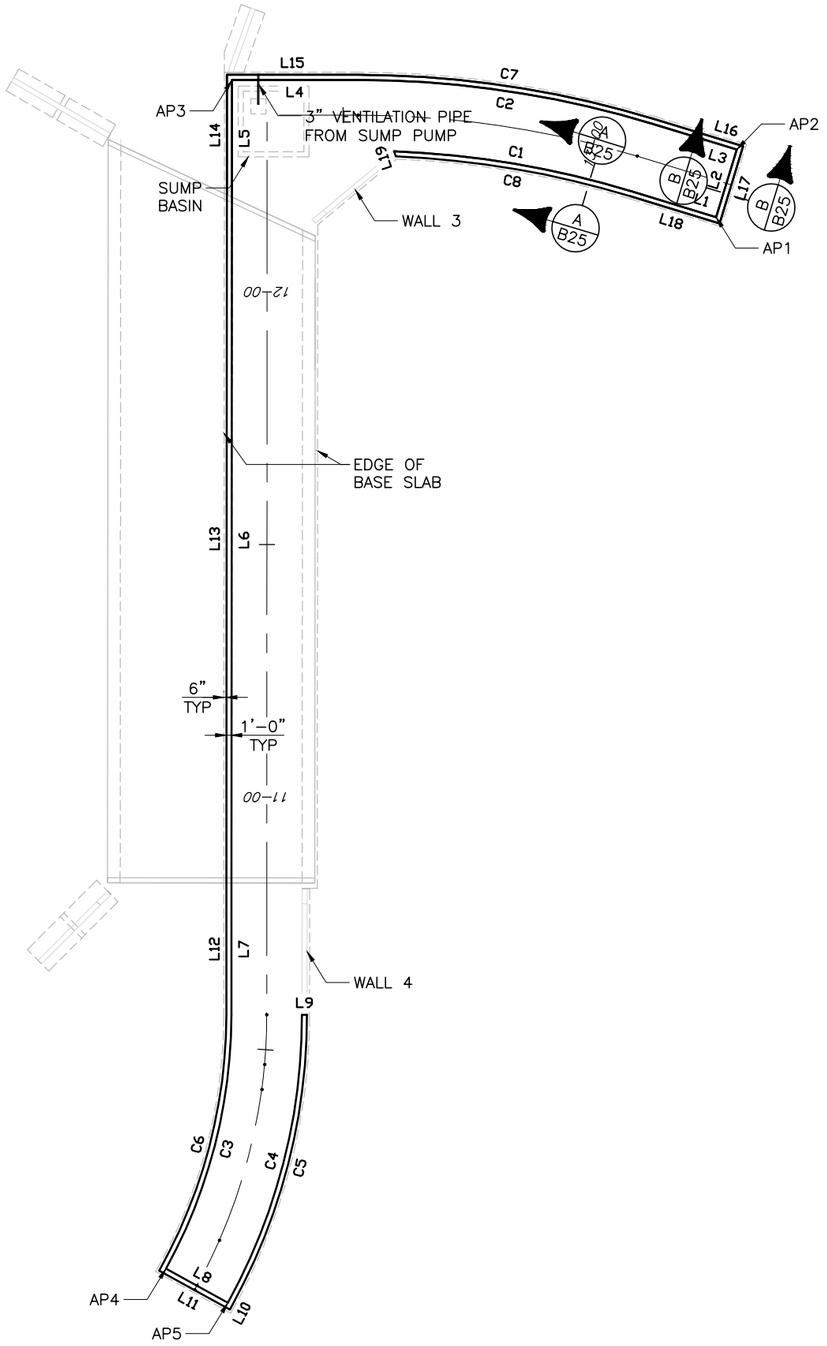
G ROAD BRIDGE REPLACEMENT
WALL 5 PLAN & ELEVATION

B21
96



PLAN

LINE TABLE: ALIGNMENTS				
LINE	START N	START E	BEARING	LENGTH
L1	50079.1068'	79093.8857'	S73°02'55"E	17.43'
L2	50074.0252'	79110.5574'	N16°57'05"E	14.00'
L3	50087.4169'	79114.6393'	N73°02'55"W	17.43'
L4	50101.1881'	79039.6532'	S90°00'00"W	24.95'
L5	50101.1881'	79014.7040'	S0°00'03"W	23.18'
L6	50078.0065'	79014.7037'	S0°02'30"W	135.76'
L7	49942.2432'	79014.6048'	S0°00'06"W	26.13'
L8	49865.8784'	79001.6670'	S61°06'30"E	13.97'
L9	49916.1329'	79028.5886'	S89°59'58"E	1.00'
L10	49858.6322'	79014.7743'	S27°47'32"W	0.99'
L11	49857.7571'	79014.3131'	N61°04'38"W	16.00'
L12	49916.1139'	79013.6041'	N0°00'06"E	26.13'
L13	49942.2439'	79013.6048'	N0°02'30"E	136.23'
L14	50078.4727'	79013.7040'	N0°00'00"E	23.72'
L15	50102.1881'	79013.7040'	N90°00'00"E	25.95'
L16	50093.4551'	79098.2591'	S73°02'55"E	18.43'
L17	50088.0819'	79115.8874'	S16°57'05"W	16.00'
L18	50072.7771'	79111.2224'	N73°02'55"W	18.41'
L19	50086.0366'	79047.1405'	N18°40'25"W	1.07'

CURVE TABLE								
CURVE	START N	START E	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	50087.0509'	79046.7976'	186.73'	47.88'	24.07'	47.75'	S80°25'26"E	14°41'33"
C2	50092.4986'	79097.9675'	202.92'	59.17'	29.80'	58.96'	N81°31'29"W	16°42'22"
C3	49916.1138'	79014.6041'	104.15'	52.43'	26.78'	51.87'	S14°26'29"W	28°50'25"
C4	49859.1267'	79013.9020'	117.34'	59.50'	30.41'	58.87'	N14°26'49"E	29°03'17"
C5	49916.1329'	79029.5886'	119.31'	60.01'	30.65'	59.38'	S14°26'50"W	28°49'05"
C6	49865.4953'	79000.3085'	103.15'	52.91'	27.05'	52.34'	N14°43'01"E	29°23'27"
C7	50102.1881'	79039.6554'	203.92'	59.46'	29.94'	59.25'	S81°31'27"E	16°42'24"
C8	50078.1456'	79093.6093'	185.00'	47.26'	23.76'	47.13'	N80°21'45"W	14°38'15"

DESCRIPTION	DATE
REVISION 1 REV_1	DATE
REVISION 2 REV_2	DATE
REVISION 3 REV_3	DATE
REVISION 4 REV_4	DATE

DRAWN BY CWG DATE 4.7.21
DESIGNED BY CWG DATE 4.7.21
CHECKED BY MCF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES:
PLAN
0 7.5 15 30

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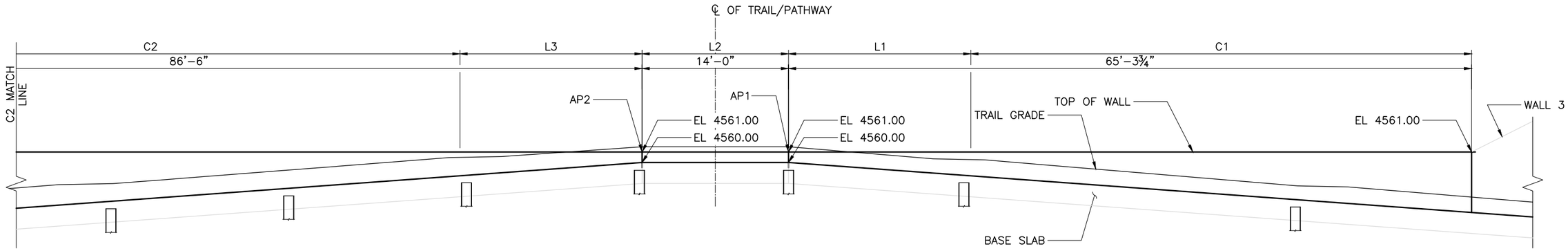
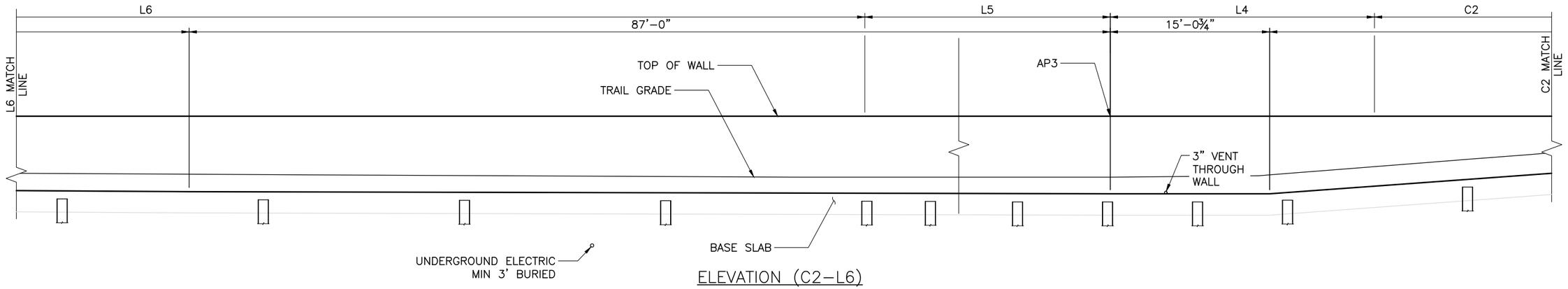
PROJECT NO.SGM: 2020-385.001

G ROAD BRIDGE REPLACEMENT
WALL 6 PLAN

B22
97



ELEVATION (C1–C2)



ELEVATION (C2–L6)

DESCRIPTION	DATE
REVISION ⚠1 REV 1	– DATE
REVISION ⚠2 REV 2	– DATE
REVISION ⚠3 REV 3	– DATE
REVISION ⚠4 REV 4	– DATE

DRAWN BY CWG DATE 4.7.21
DESIGNED BY CWG DATE 4.7.21
CHECKED BY MCF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES:
PLAN
0 2.5 5 10

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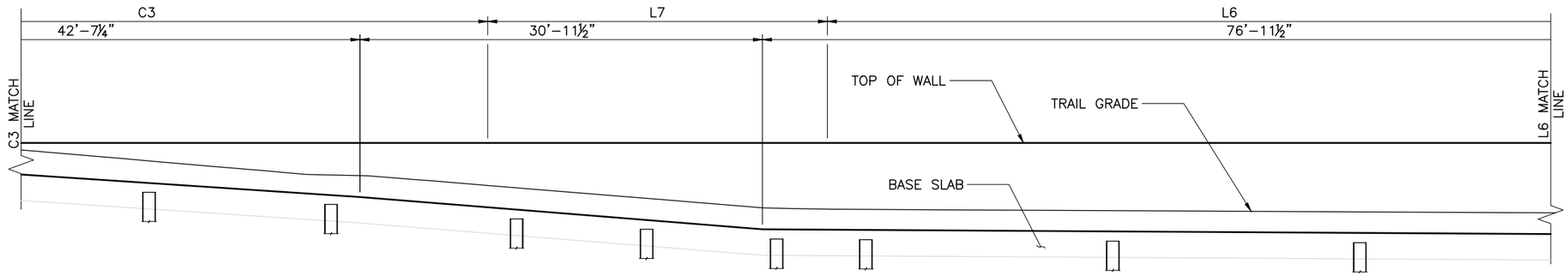
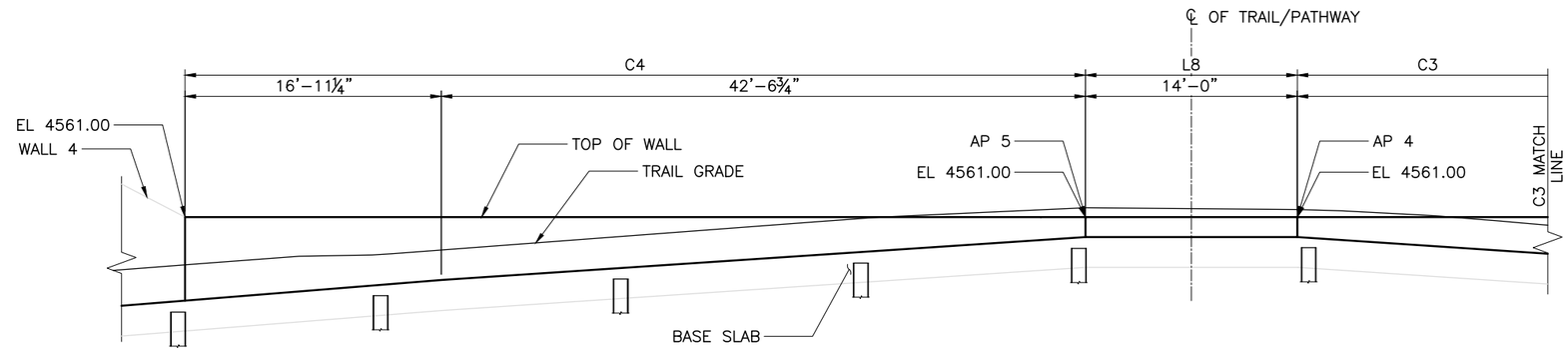
PROJECT NO.SGM: 2020–385.001

G ROAD BRIDGE REPLACEMENT
WALL 6 ELEVATION (1)

B23
98



ELEVATION (C3–L6)



ELEVATION (C4–C3)

DESCRIPTION	DATE
REVISION 1 REV 1	– DATE
REVISION 2 REV 2	– DATE
REVISION 3 REV 3	– DATE
REVISION 4 REV 4	– DATE

DRAWN BY CWG DATE 4.7.21
DESIGNED BY CWG DATE 4.7.21
CHECKED BY MCF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES:
PLAN
0 2.5 5 10

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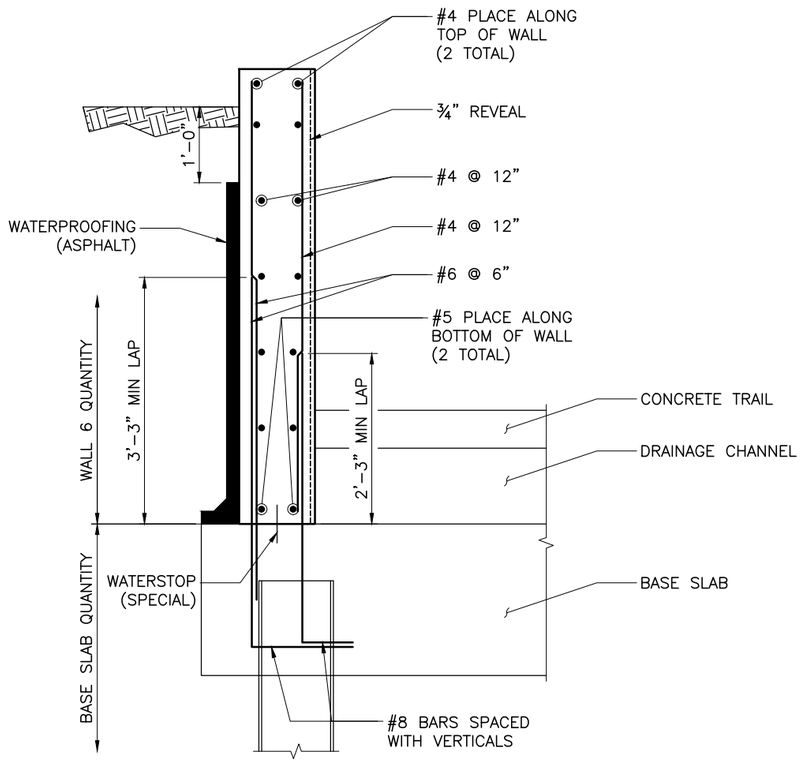
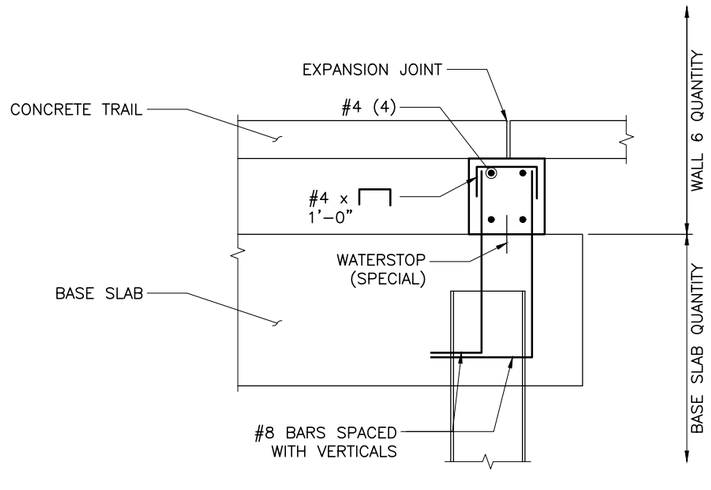
G ROAD BRIDGE REPLACEMENT
WALL 6 ELEVATION (2)

B24
99



SECTION A B22



SECTION B B22

NOTES:

1. CONCRETE CLASS D (SPECIAL) SHALL BE USED. XYPEX C-500 OR ENGINEER APPROVED WATERPROOFING ADMIXTURE SHALL BE ADDED TO CONCRETE CLASS D PER MANUFACTURER'S RECOMMENDATION.
2. WALL SHALL HAVE STRUCTURAL CONCRETE COATING (ANTI-GRAFFITI)
3. WALL EXPANSION JOINTS SHALL BE LOCATED AT 88' MAXIMUM ON CENTER. WEAKENED PLANES SHALL BE LOCATED AT 22' MAXIMUM ON CENTER. SEE WALL DETAILS.

DESCRIPTION	DATE
REVISION 1 REV_1	DATE
REVISION 2 REV_2	DATE
REVISION 3 REV_3	DATE
REVISION 4 REV_4	DATE

DRAWN BY CWG DATE 4.7.21
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CHECKED BY MCF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES:
PLAN
0 2.5 5 10

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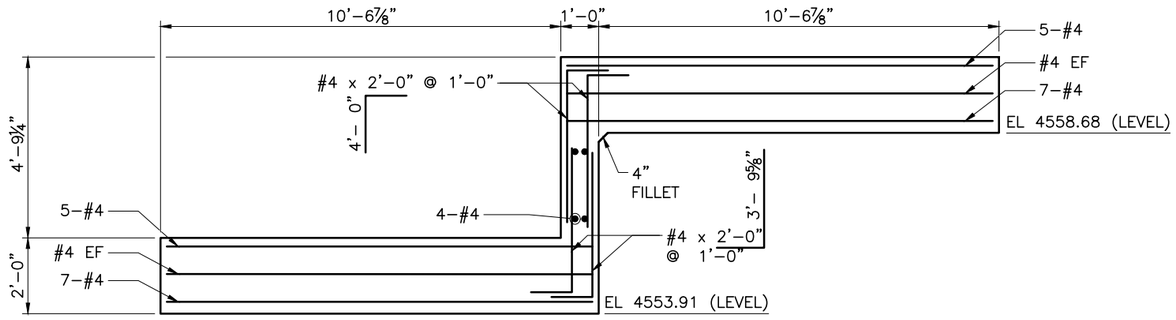
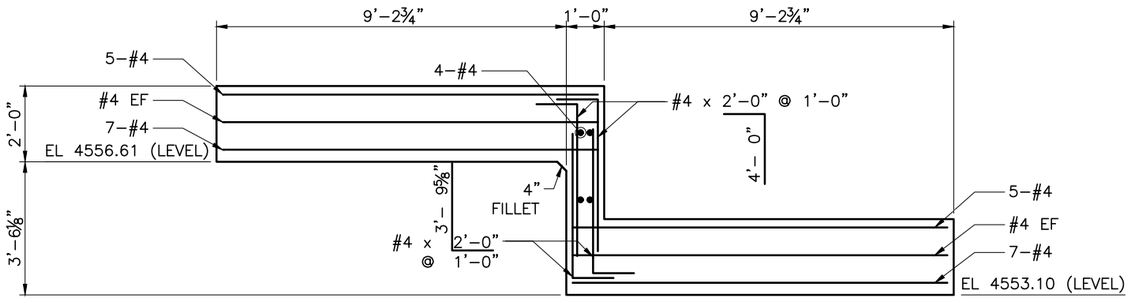
ENGINEERING DIVISION
PROJECT NO.SGM: 2020-385.001

G ROAD BRIDGE REPLACEMENT
WALL 6 DETAILS

B25
100



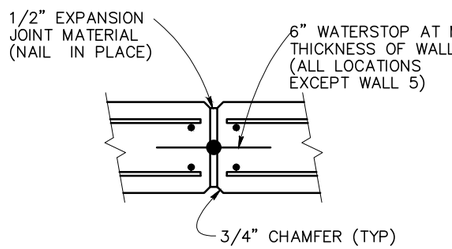
WALL 1 FOOTING



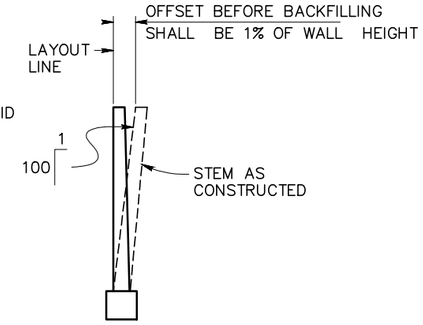
WALL 2 FOOTING

NOTES:

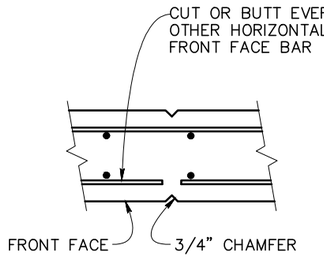
1. INSTALL 1/2" EXPANSION JOINTS AT LOCATIONS SHOWN IN THE PLANS AND AT MAXIMUM SPACINGS SHOWN IN THE PLANS. ALL WORK TO CONSTRUCT THE 1/2" EXPANSION JOINT, INCLUDING THE WATERSTOP AND EXPANSION JOINT MATERIAL SHALL BE INCLUDED IN ITEM NO. 518-00106 WATERSTOP (6 INCH)
2. WEAKENED PLANES WILL NOT BE MEASURED AND PAID FOR SEPERATELY BUT SHALL BE INCLUDED IN THE WORK.



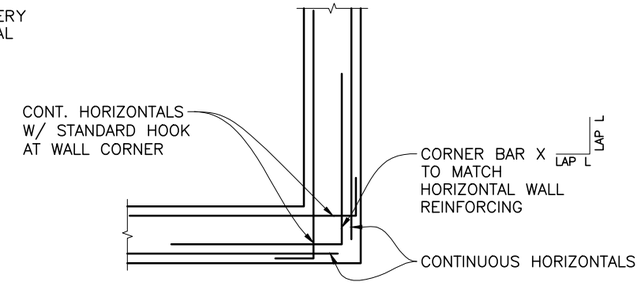
WALL EXPANSION JOINT DETAIL



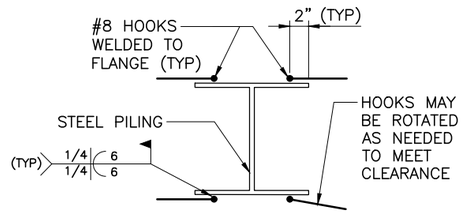
WALL CONSTRUCTION OFFSET



WEAKENED PLANE



TYPICAL WALL CORNER REINFORCING



BAR WELDED TO PILE DETAIL

DESCRIPTION	DATE
REVISION ⚠1 REV 1	– DATE
REVISION ⚠2 REV 2	– DATE
REVISION ⚠3 REV 3	– DATE
REVISION ⚠4 REV 4	– DATE

DRAWN BY	CWG	DATE	4.7.21
DESIGNED BY	CWG	DATE	4.7.21
CHECKED BY	MCF	DATE	4.7.21
APPROVED BY	ELK	DATE	4.7.21

SCALES: PLAN

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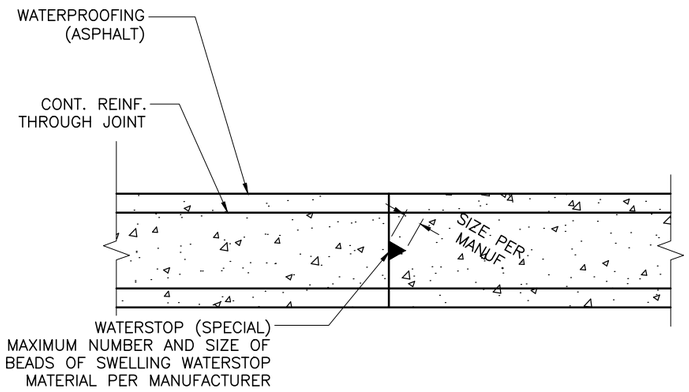
PROJECT NO.SGM: 2020-385.001

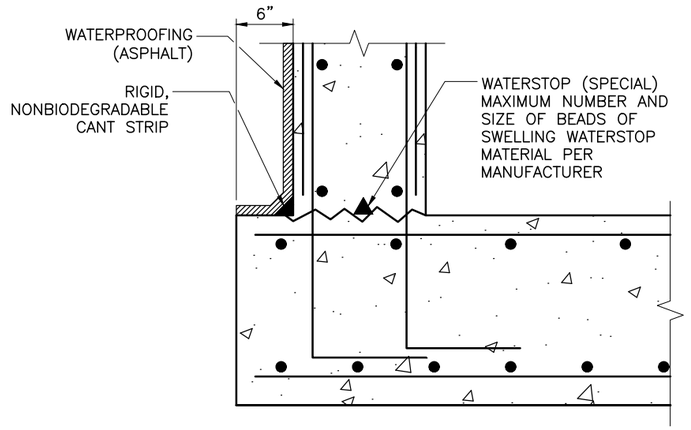
G ROAD BRIDGE REPLACEMENT
WALL DETAILS (1)

B26
101

REINFORCING



WALL CONSTRUCTION JOINT



TYPICAL WALL TO BASE SLAB CONSTRUCTION JOINT – CROSS SECTION VIEW

SWELLING WATERSTOP NOTES:

INSTALL ALL WATERSTOP IN ACCORDANCE WITH MANUFACTURER'S RECCOMENDED PROCEDURES AND MATERIALS. PROCEDURES SHALL, AT A MINIMUM, CONFORM WITH THE FOLLOWING RECOMMENDATIONS, UNLESS CONTRADICTED BY MANUFACTURER:

SURFACE PREPARATION:

1. CLEAN ALL SURFACES. SUBSTRATE MUST BE CLEAN, SOUND, FREE OF LOOSE PARTICLES, DUST, LAITANCE, OILS, AND OTHER CONTAMINANTS.
2. SURFACE MAY BE DRY OR DAMP, WITH NO PRESENCE OF STANDING WATER. DO NOT LEAVE THE PRODUCT IN CONTACT WITH WET CONCRETE, OR ON A SURFACE WITH A VERY HIGH MOISTURE CONTENT, BEFORE CASTING NEW CONCRETE.

APPLICATION:

1. RECOMMENDED APPLICATION TEMPERATURES: 50°–90°F.
2. EXTRUDE MATERIAL USING APPROVED BULK CAULKING GUN. CUT THE NOZZLE TO OBTAIN THE MANUFACTURER RECOMMENDED SIZE AND SHAPE OF BEAD SECTION.
3. APPLY A UNIFORM, CONTINUOUS BEAD TO THE HARDENED CONCRETE. WAIT FOR APPROXIMATELY 2 HOURS AFTER PLACEMENT BEFORE PLACING CONCRETE. THE MINIMUM THICKNESS OF CONCRETE AROUND THE SWELLING WATERSTOP SHOULD BE 4 INCHES ON EACH SIDE AND 4 INCHES ON TOP.

CAUTIONS:

1. PROTECT FROM RAIN TO AVOID EXPANSION BEFORE PLACING NEW CONCRETE AND TO ASSURE 100% SWELLING CAPACITY.

DESCRIPTION	DATE
REVISION ⚠ REV 1	– DATE
REVISION ⚠ REV 2	– DATE
REVISION ⚠ REV 3	– DATE
REVISION ⚠ REV 4	– DATE

DRAWN BY CWG DATE 4.7.21
DESIGNED BY CWG DATE 4.7.21
CHECKED BY MCF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES: 1/4"=1'-0" PLAN & ELEV, 1/2"=1'-0" SECTION

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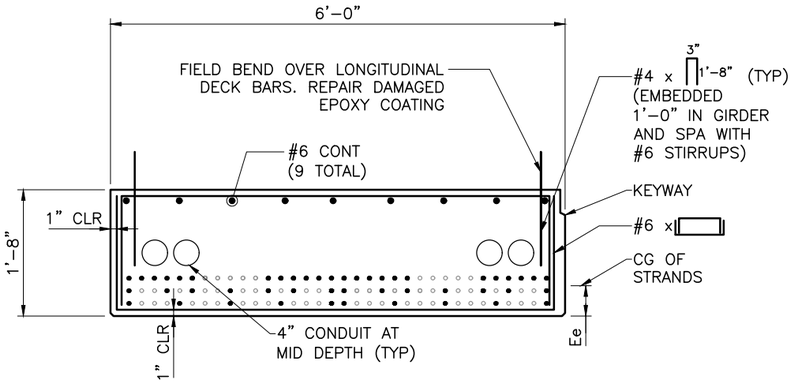
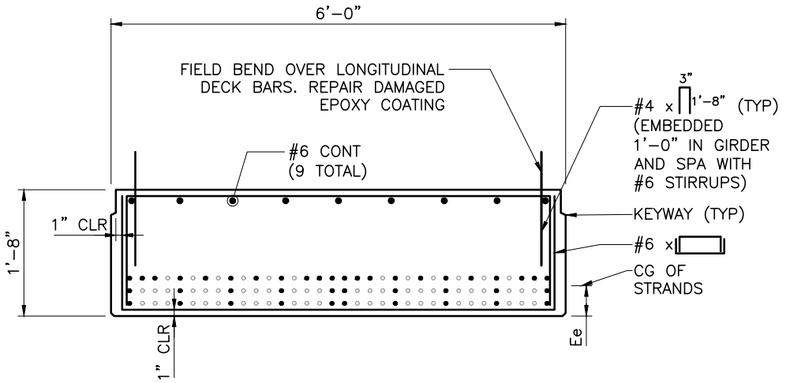
G ROAD BRIDGE REPLACEMENT
WALL DETAILS (2)

B27
102



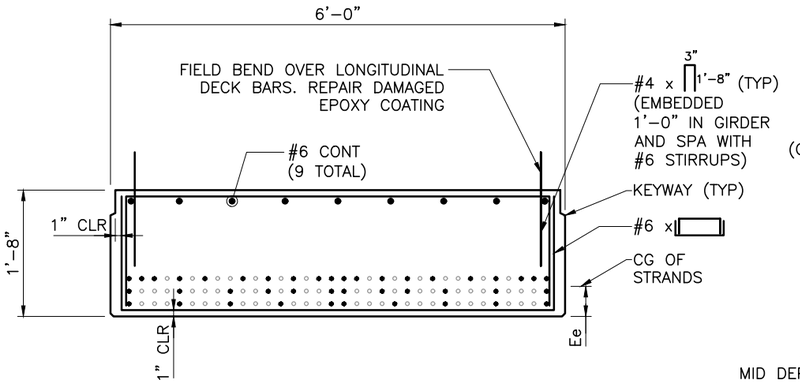
TYPICAL SECTION–GIRDER A

(LOOKING AHEAD ON STATION)



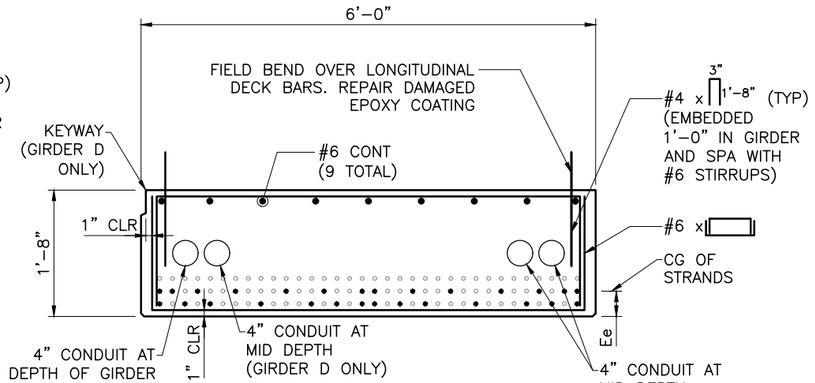
TYPICAL SECTION–GIRDER C

(LOOKING AHEAD ON STATION)



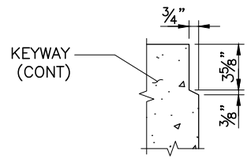
TYPICAL SECTION–GIRDER B

(LOOKING AHEAD ON STATION)



TYPICAL SECTION–GIRDER D–T

(LOOKING AHEAD ON STATION)



KEYWAY DETAIL

NOTES:

ALL WORK NECESSARY TO FABRICATE AND INSTALL THE INTEGRAL PARTS OF THE GIRDER (INCLUDING THE LEVELING PADS), AS SHOWN ON THE PLANS SHALL BE INCLUDED IN THE BID PRICE FOR ITEM NO 618, PRESTRESSED CONCRETE SLAB (DEPTH GREATER THAN 13 INCHES), WITH A PAY UNIT OF SQ. FT. MEASURED BY THE PLAN AREA OF THE SLAB GIRDERS.

WHEN APPROVED BY THE ENGINEER A MINIMUM OF TACK WELDING WILL BE PERMITTED ON ASTM A706 UNCOATED REINFORCING STEEL.

REINFORCING PROJECTING FROM THE TOP OF THE GIRDER AND REINFORCING WITHIN EIGHT FEET OF AN EXPANSION DEVICE IN THE BRIDGE DECK SHALL BE EPOXY COATED. DAMAGED COATING ON GIRDER REINFORCING NEED NOT BE REPAIRED. THE MINIMUM COVER FOR REINFORCING STEEL IS 1".

AT GIRDER ENDS NOT EMBEDDED IN CONCRETE DIAPHRAGMS, CUT STRANDS OFF 1" BELOW THE SURFACE OF THE CONCRETE AND FINISH WITH AN APPROVED EPOXY GROUT. AT GIRDER ENDS EMBEDDED IN CONCRETE DIAPHRAGMS, CUT STRANDS TO PROJECT 3", EXCEPT AS SHOWN. DO NOT MAKE COSMETIC REPAIRS (DAMAGE LESS THAN 1½" DEEP) TO THE PARTS OF THE GIRDERS EMBEDDED IN CONCRETE.

THE STRAND CONFIGURATIONS SHOWN IN THE TYPICAL SECTIONS ARE FOR REFERENCE ONLY. THE ACTUAL STRAND CONFIGURATIONS SHALL BE DETERMINED BY THE PRECASTER AND MEET THE REQUIREMENTS OF THE GIRDER SCHEDULE AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 5.9. EXTERIOR STRANDS SHALL NOT BE DEBONDED AND SHOULD BE PLACED ADJACENT TO ANCHOR STIRRUPS. DEBONDED STRANDS SHALL BE SYMMETRIC ABOUT THE CENTERLINE OF THE GIRDER.

USE LOW RELAXATION STRANDS MEETING THE REQUIREMENTS OF ASTM A416 GRADE 270. THE MINIMUM CLEAR DISTANCE BETWEEN GROUPS OR INDIVIDUAL STRANDS SHALL BE $2.3(d_s)$ BUT NOT LESS THAN 1¼". THE MINIMUM COVER FOR PRESTRESSING STEEL IS 1½"

A_s* = MINIMUM AREA OF THE PRESTRESSING STEEL.
d_s = NOMINAL STRAND DIAMETER.
f'_s = ULTIMATE STRENGTH OF PRESTRESSING STEEL.
F_j = JACKING FORCE PER GIRDER.
F_f = FINAL FORCE PER GIRDER AFTER ALL LOSSES.
f'_{ci} = REQUIRED CONCRETE STRENGTH AT RELEASE OF PRESTRESS FORCE.
f'_c = REQUIRED CONCRETE STRENGTH AT 28 DAYS OF AGE.
L = LENGTH OF GIRDER ALONG THE GRADE OF THE GIRDER.
Y_g = DISTANCE FROM BOTTOM OF GIRDER TO CENTROID OF DEBONDED ROW.
Δ = DEFLECTION AT CENTERLINE OF SPAN DUE TO CAST–IN–PLACE DECK, HEADWALL, RAILING, AND SUPERIMPOSED FILL ON THE DECK.
θ = BRIDGE SKEW ANGLE

CONCRETE SHALL BE CLASS PS.

ENTRAINED AIR IS NOT REQUIRED FOR GIRDER CONCRETE.

USE ½" CHAMFER ON ALL CORNERS, EXCEPT AS NOTED.

PREDICTED CAMBER IS THE CAMBER FOR THE GIRDER ALONE AT 90 DAYS. THE CONTRACTOR SHALL LIMIT THE CAMBER GROWTH TO A VALUE NOT TO EXCEED THE PREDICTED CAMBER PLUS 1" PRIOR TO THE DECK POUR BY WEIGHTING, SCHEDULING FABRICATION, POST TENSIONING, OR OTHER MEANS AND MUST REPORT TO THE ENGINEER VALUES OF CAMBER WHICH EXCEED THE PREDICTED CAMBER PLUS 1". REMEDIAL MEASURES, AS APPROVED BY THE ENGINEER, SHALL BE TAKEN IF THE PREDICTED CAMBER PLUS 1" IS EXCEEDED. THE APPROVED REMEDIAL MEASURES SHALL BE FREE OF ANY ADVERSE IMPACT. THE COSTS ASSOCIATED WITH ALL REMEDIAL MEASURES SHALL BE BORNE BY THE CONTRACTOR.

GIRDERS D–T SHALL NOT HAVE CAMBERS OF ADJACENT GIRDERS THAT DIFFER BY MORE THAN 1" BEFORE THE DECK POUR. PRIOR TO PLACING DECK REINFORCING, THE CONTRACTOR SHALL ADJUST THIS DIFFERENTIAL TO WITHIN THIS LIMIT BY SORTING THE GIRDERS TO MINIMIZE DIFFERENTIALS, OR BY PULLING THE HIGH SLABS DOWN AND THE LOW SLABS UP.

DEPTH (D) TOLERANCE SHALL BE +½", –¼".

THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING NECESSARY BRACING REQUIREMENTS AND FOR PROVIDING ADEQUATE BRACING FOR THE SPECIFIC WIND AND WEATHER CONDITIONS TO BE ENCOUNTERED FOR EACH SPECIFIC PROJECT.

CONDUITS SHALL BE SCHEDULE 40 RIGID NON–METALLIC CONFORMING TO NEMA TC–2 AND ANSI/UL 651. CONDUITS IN GIRDERS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE GIRDERS.

GIRDER SCHEDULE

Span No.	Girder	A_s* (Sq In)	Total Strands	E_e (In.)	F_j (Kips)	F_f (Kips)	Concrete Strength f'_{ci} (psi)	Concrete Strength f'_c (psi)	Δ (In.)	Predicted Release Camber (In.)	Predicted Camber (In.)	Debonded Strands (percent)	Debond Row 1 No. Strands	Debond Row 1 Y_g (In.)	Debond Row 1 Length	Debond Row 2 No. Strands	Debond Row 2 Y_g (In.)	Debond Row 2 Length
1	A	10.416	48	4.583	2109.24	1833.84	6000	7500	0.56	0.99	2.01	4.17	2	2.00	8'–0"			
1	B	9.114	42	4.476	1845.59	1622.62	6000	7500	0.56	0.79	1.61	9.52	4	2.00	6'–9"			
1	C	9.114	42	4.571	1845.59	1614.47	6000	7500	0.50	0.75	1.52	19.05	4	2.00	6'–0"	4	4.00	3'–0"
1	D–T	6.076	28	3.000	1230.39	1097.07	6000	7500	0.31	0.60	1.24	14.29	4	2.00	3'–0"			

THIS TABLE IS BASED ON 0.60" DIAMETER SEVEN–WIRE STRAND

DESCRIPTION	DATE
REVISION 1 REV 1	– DATE
REVISION 2 REV 2	– DATE
REVISION 3 REV 3	– DATE
REVISION 4 REV 4	– DATE

DRAWN BY CWG DATE 4.7.21
DESIGNED BY CWG DATE 4.7.21
CHECKED BY MCF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES: NTS
PLAN

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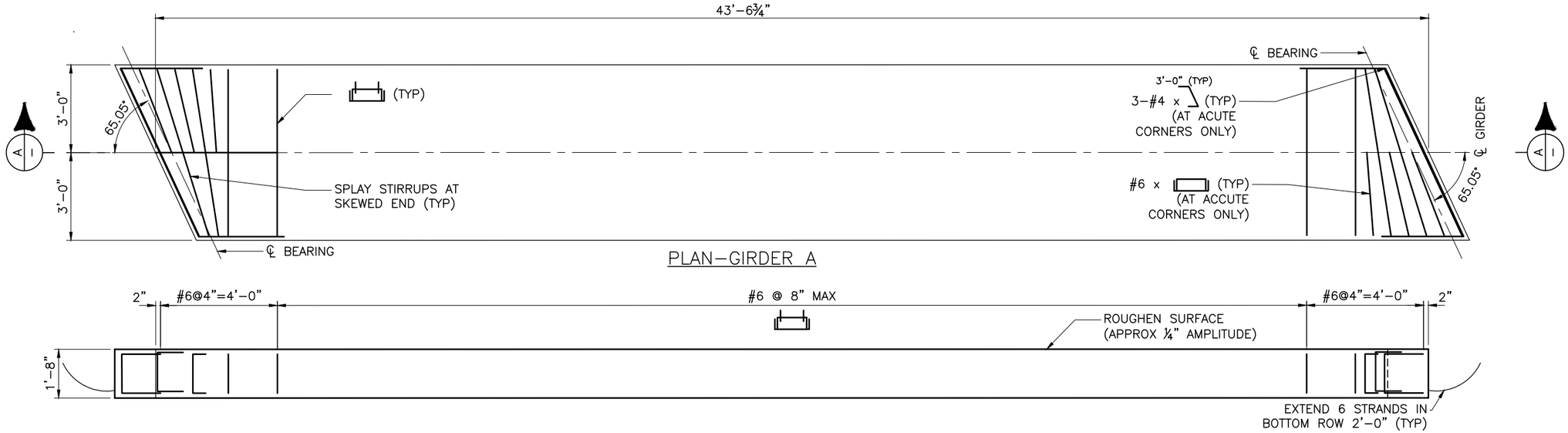
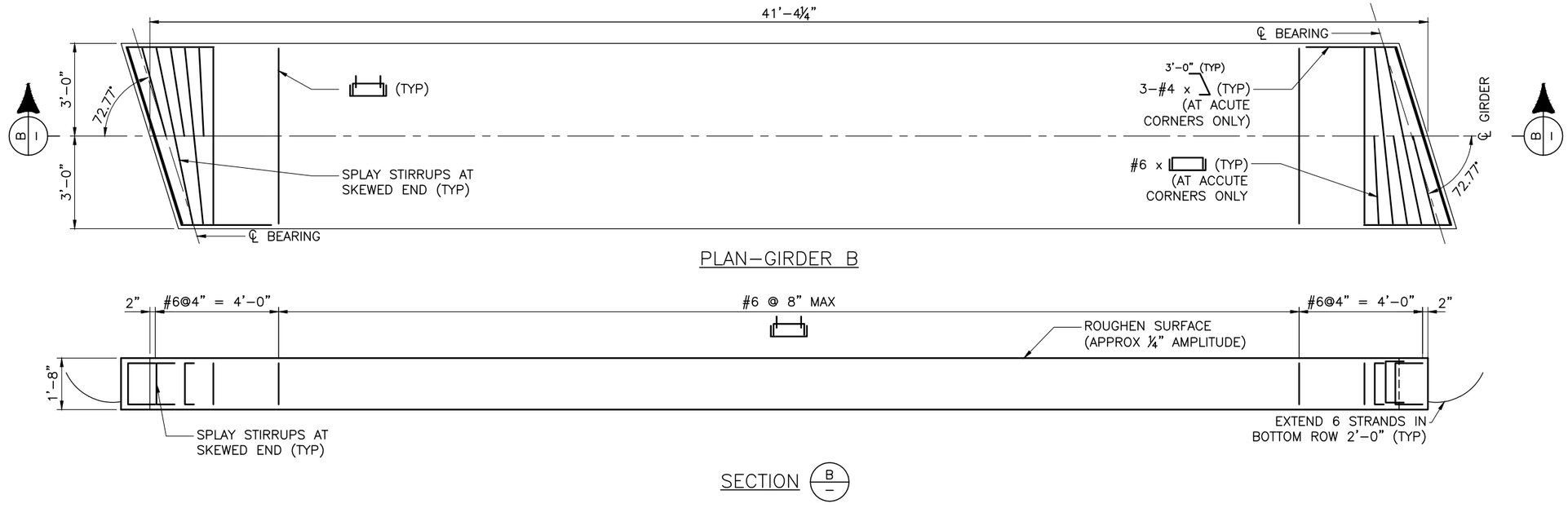
G ROAD BRIDGE REPLACEMENT
PRESTRESSED CONCRETE SLAB (1)

B28
103



PLAN–GIRDER A

SECTION A



PLAN–GIRDER B

SECTION B

DESCRIPTION	DATE
REVISION 1 REV 1	– DATE
REVISION 2 REV 2	– DATE
REVISION 3 REV 3	– DATE
REVISION 4 REV 4	– DATE

DRAWN BY	CWG	DATE	4.7.21
DESIGNED BY	CWG	DATE	4.7.21
CHECKED BY	MCF	DATE	4.7.21
APPROVED BY	ELK	DATE	4.7.21

SCALES: PLAN 1/4"=1'-0"
ELEVATION 1/4"=1'-0"

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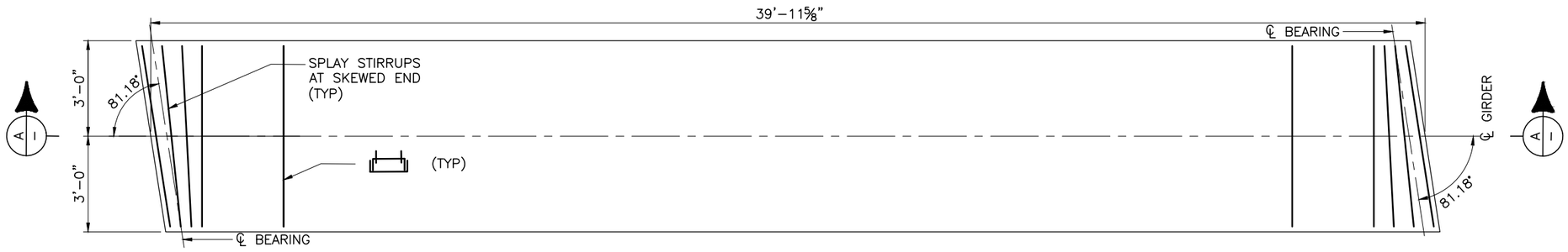
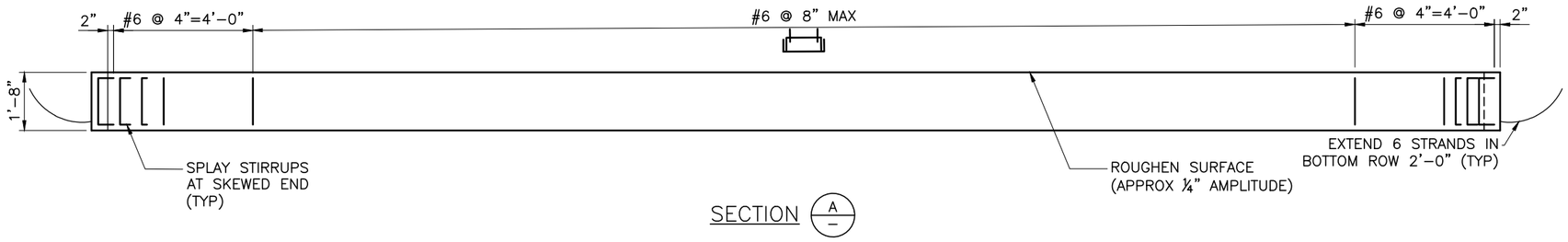
G ROAD BRIDGE REPLACEMENT
PRESTRESSED CONCRETE SLAB (2)

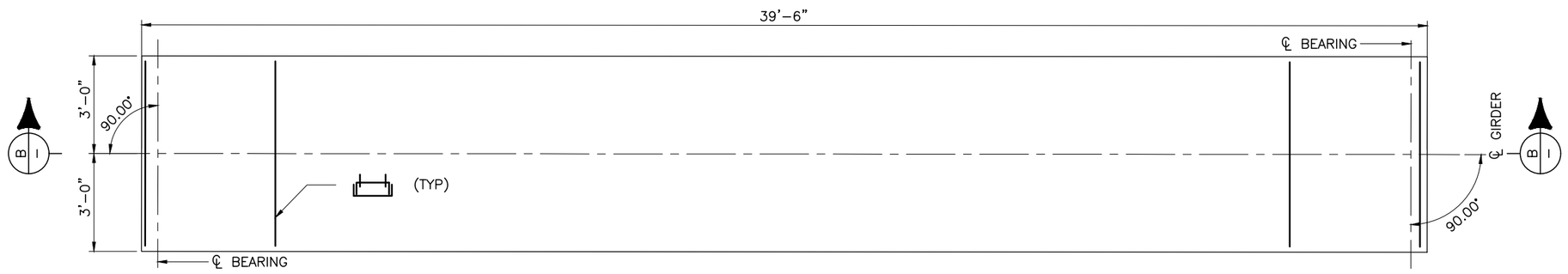
B29
104



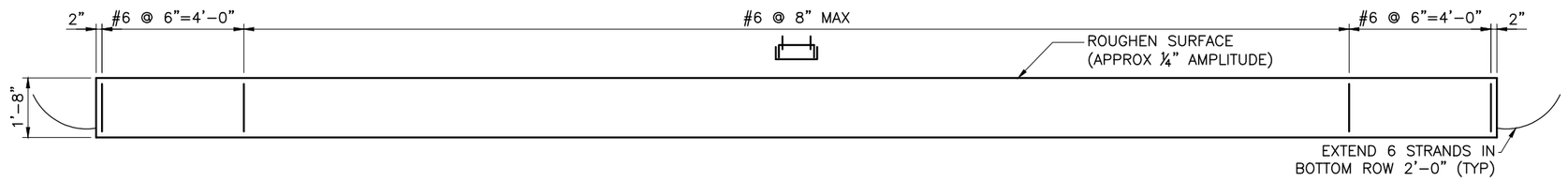
PLAN–GIRDER C



SECTION A/–



PLAN–GIRDERS D–T



SECTION B/–

DESCRIPTION	DATE
REVISION 1 REV_1	– DATE
REVISION 2 REV_2	– DATE
REVISION 3 REV_3	– DATE
REVISION 4 REV_4	– DATE

DRAWN BY	CWG	DATE	4.7.21
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SCALES: PLAN 1/4"=1'-0"
ELEVATION 1/4"=1'-0"

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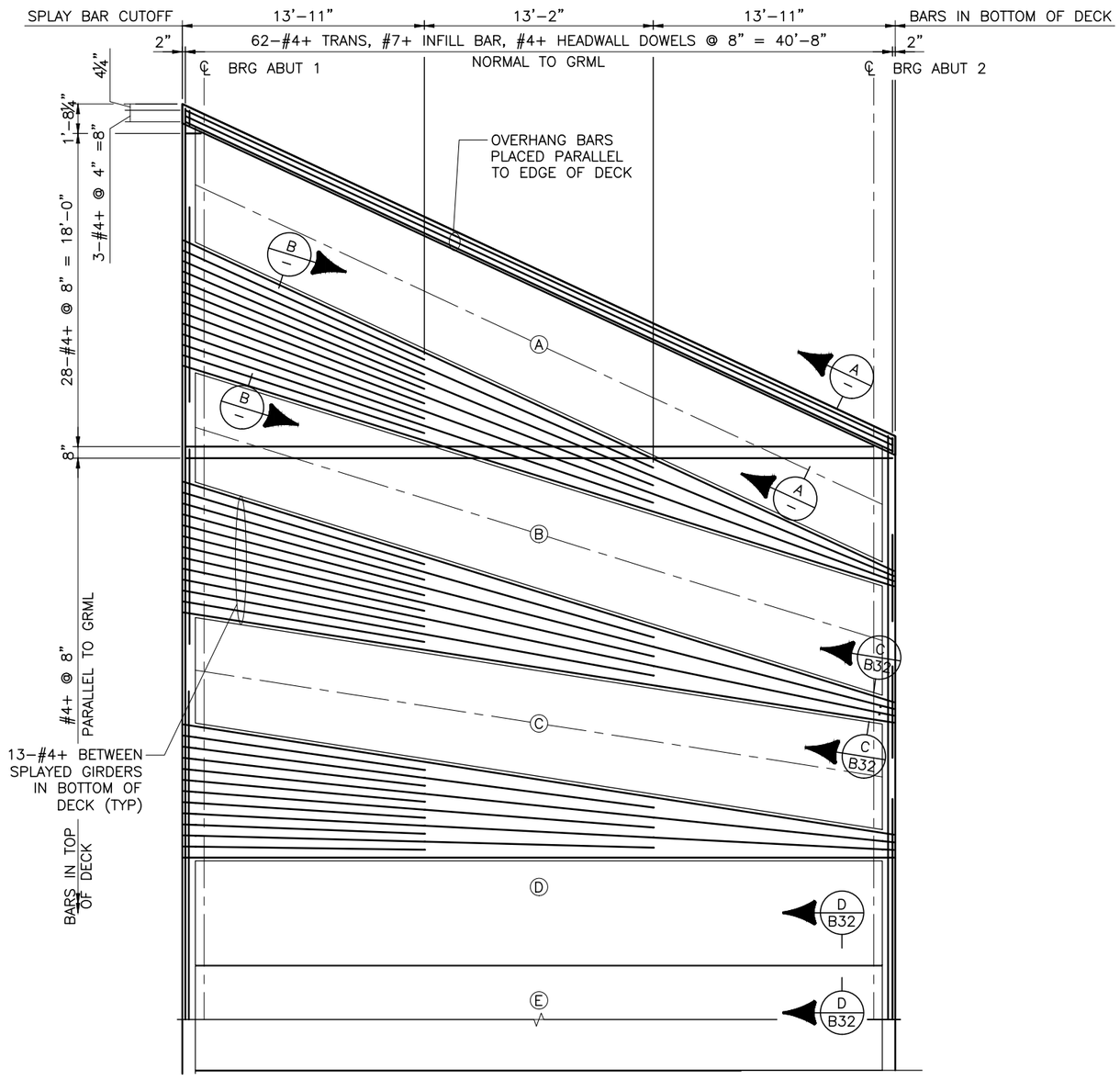
G ROAD BRIDGE REPLACEMENT
PRESTRESSED CONCRETE SLAB (3)

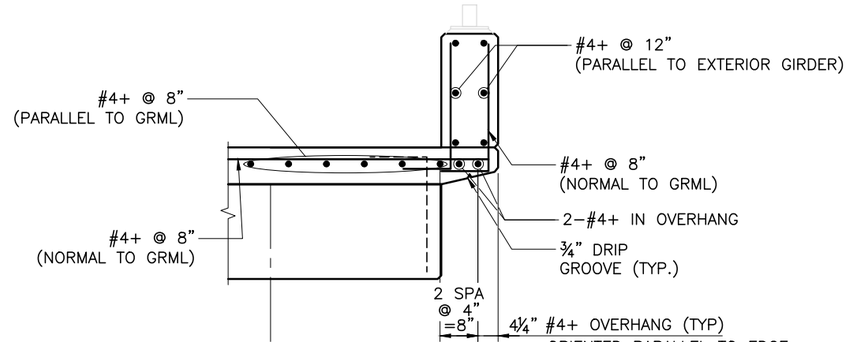
B30
105



DECK REINFORCING PLAN
(CLOSE–UP AT NORTH
END OF BRIDGE DECK)

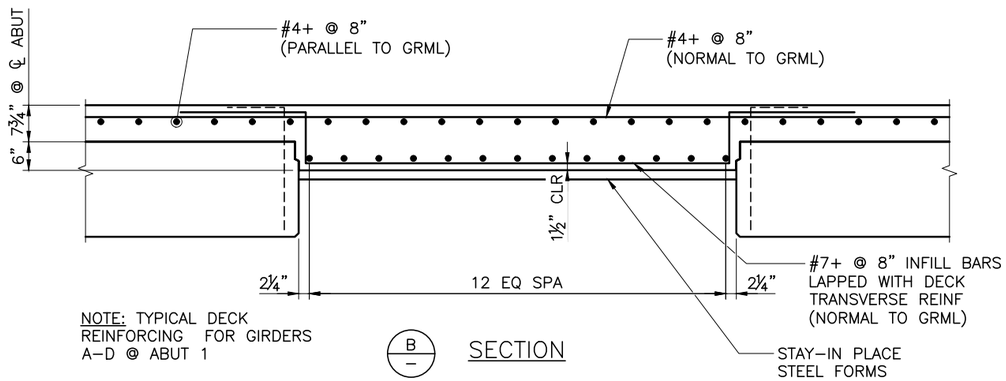
NOTES:

1. TOP OF DECK HAS NO CROSS SLOPE.
2. CONCRETE CLASS D SHALL BE USED FOR THE DECK SLAB.
3. CONCRETE IN THE DECK TOPPING SHALL BE PLACED IN ONE CONTINUOUS OPERATION AND SHALL BE MONOLITHIC WITH THE CONCRETE IN THE ABUTMENTS ABOVE THE BEARING SEAT.
4. ALL REINFORCING STEEL PLACED IN THE DECK SLAB OR EXTENDING INTO THE DECK SLAB SHALL BE EPOXY COATED.
5. MINIMUM SPLICE LENGTH OF LONGITUDINAL BARS IS 2'–0". LONGITUDINAL BAR SPLICES SHALL BE STAGGERED.
6. THE TOP SURFACE OF THE PRESTRESSED CONCRETE SLABS SHALL BE THOROUGHLY MOISTENED WITH WATER IMMEDIATELY PRIOR TO PLACING THE DECK SLAB. POCKETS OF STANDING WATER WILL NOT BE ALLOWED DURING THE POUR.
7. PERMANENT METAL DECKING WILL NOT BE PAID SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.



A/– SECTION

NOTE: TYPICAL DECK OVERHANG REINFORCING



NOTE: TYPICAL DECK REINFORCING FOR GIRDERS A–D @ ABUT 1

B/– SECTION

DESCRIPTION	DATE
REVISION ⚠ REV 1	– DATE
REVISION ⚠ REV 2	– DATE
REVISION ⚠ REV 3	– DATE
REVISION ⚠ REV 4	– DATE

DRAWN BY CWG DATE 4.7.21
DESIGNED BY CWG DATE 4.7.21
CHECKED BY MCF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES: 3/8"=1'–0" (DETAILS)
PLAN
0 2.5 5 10

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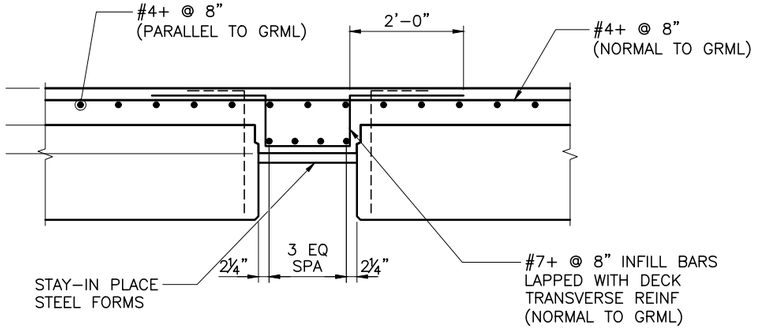
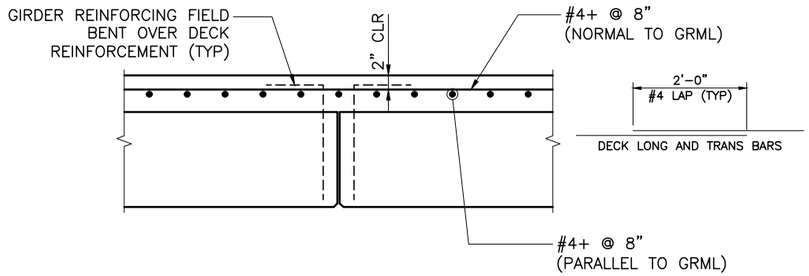
G ROAD BRIDGE REPLACEMENT
SUPERSTRUCTURE DETAILS (1)

B31
106



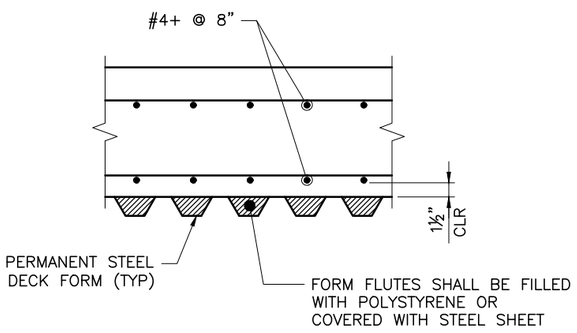
C / B31 SECTION

NOTE: TYPICAL DECK REINFORCING FOR GIRDERS A–D @ ABUT 2

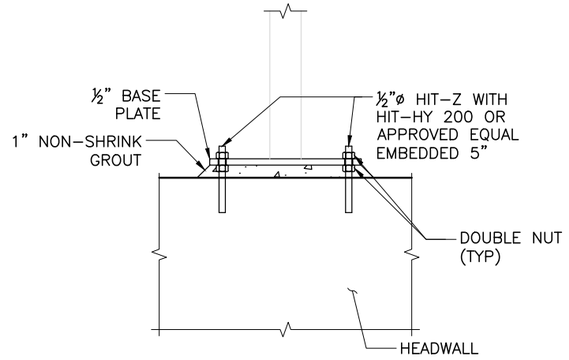


D / B31 SECTION

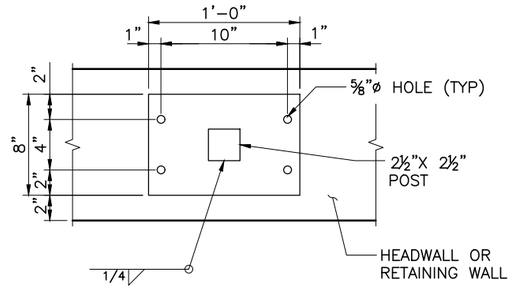
NOTE: TYPICAL DECK REINFORCING FOR GIRDERS D–T



PERMANENT STEEL DECK FORM DETAIL



HEADWALL ELEVATION



BASE PLATE DETAIL

(THIS DETAIL IS APPLICABLE FOR PEDESTRIAN SAFETY RAILING MOUNTED ON HEADWALL)

POST STATION & OFFSETS		
South Railing	Station	Offset
POST 1	38+59.37	65.25
POST 2	38+67.45	65.25
POST 3	38+75.57	65.25
POST 4	38+83.70	65.25
POST 5	38+91.82	65.25
POST 6	38+98.37	65.25
North Railing	Station	Offset
POST 1	38+59.33	80.44
POST 2	38+64.20	78.18
POST 3	38+71.56	74.74
POST 4	38+78.93	71.31
POST 5	38+86.29	67.87
POST 6	38+93.65	64.44
POST 7	38+98.51	62.20

DESCRIPTION	DATE
REVISION 1 REV 1	DATE
REVISION 2 REV 2	DATE
REVISION 3 REV 3	DATE
REVISION 4 REV 4	DATE

DRAWN BY CWG DATE 4.7.21
DESIGNED BY CWG DATE 4.7.21
CHECKED BY MCF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES: 3/8"=1'–0" (SECTION)
PLAN: 1/8"=1'–0"

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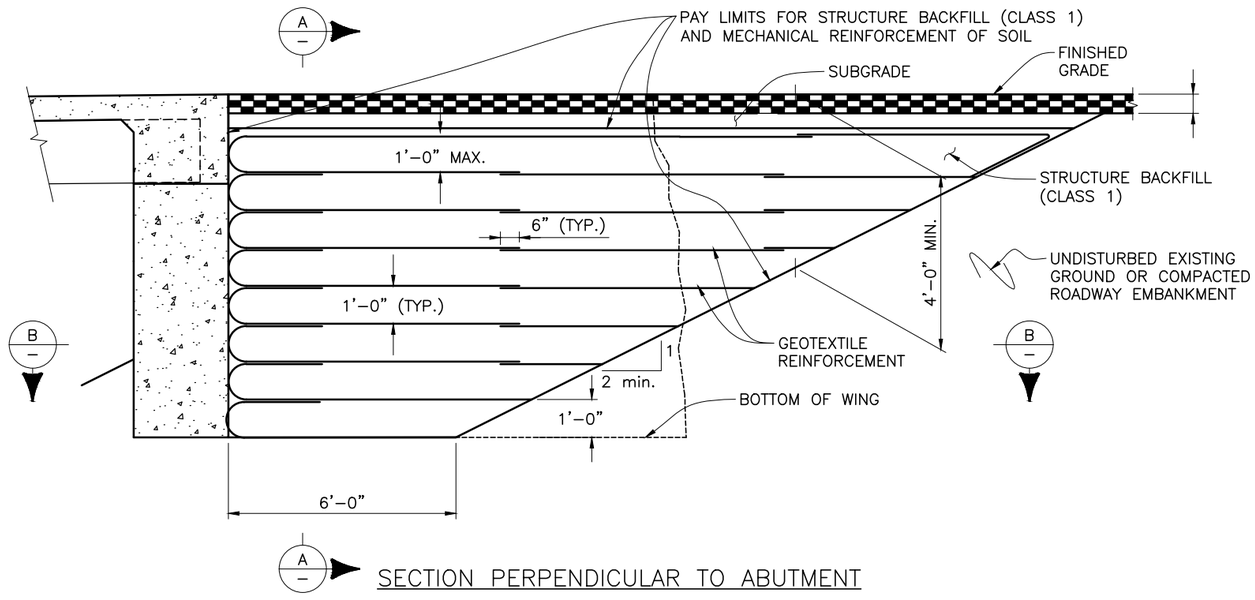
PROJECT NO.SGM: 2020–385.001

G ROAD BRIDGE REPLACEMENT
SUPERSTRUCTURE DETAILS (2)

B32
107

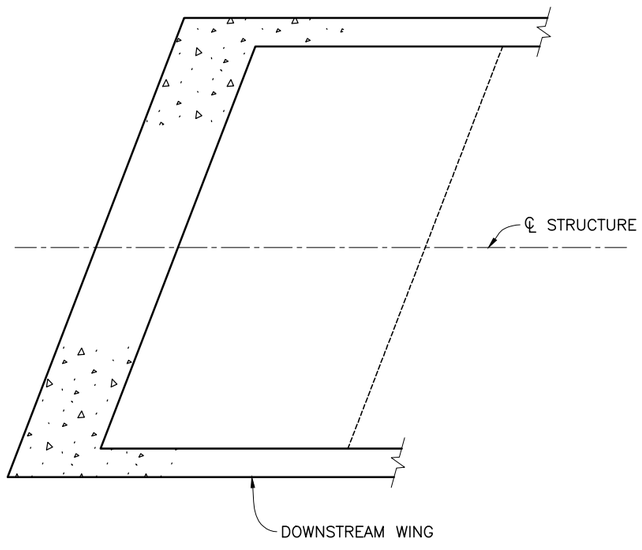


SECTION PERPENDICULAR TO ABUTMENT

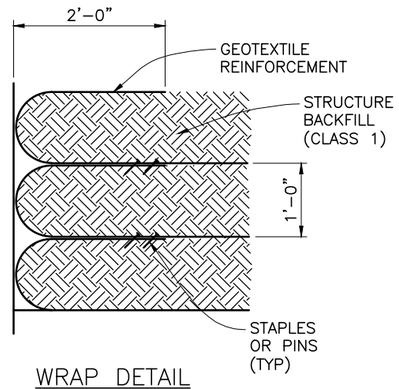
NOTES:

1. GEOTEXTILE REINFORCEMENT SHALL BE A WOVEN FABRIC WITH A MINIMUM AVERAGE ROLL VALUE OF 4800 LB/FT FOR INSTALLATIONS WITH A GAP AND 2400 LB/FT FOR INSTALLATIONS WITHOUT A GAP BASED ON ASTM D4595.
2. GEOTEXTILE REINFORCEMENT SHALL BE PLACED BY ALTERNATING MACHINE DIRECTION (MD) WITH CROSS MACHINE DIRECTION (XD) FROM LAYER TO LAYER.
3. THE GEOTEXTILE WRAP AT BACK FACE OF ABUTMENT SHALL BE PULLED BACK SLACK FREE WITH ITS END ANCHORED TO SOIL UNDERNEATH WITH STAPLES OR PINS.
4. MINIMUM SPLICE OF ALL GEOFABRIC SHALL CONSIST OF 6" OF OVERLAP.
5. PAYMENT FOR ALL WORK ITEMS SHOWN WILL BE MADE UNDER ITEM 206 MECHANICAL REINFORCEMENT OF SOIL (CY) AND ITEM 206 STRUCTURE BACKFILL (CLASS 1) (CY)

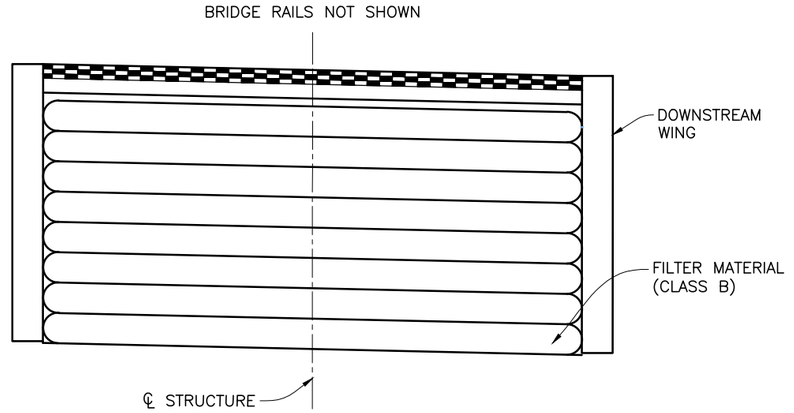
NOTES:
Geotextile rei
Minimum Ave
D4595.
Geotextile Re
Machine Direc
layer to layer



SECTION B



WRAP DETAIL



SECTION A

DESCRIPTION	DATE
REVISION ⚠ REV 1	– DATE
REVISION ⚠ REV 2	– DATE
REVISION ⚠ REV 3	– DATE
REVISION ⚠ REV 4	– DATE

DRAWN BY CWG DATE 4.7.21
DESIGNED BY CWG DATE 4.7.21
CHECKED BY MCF DATE 4.7.21
APPROVED BY ELK DATE 4.7.21

SCALES: 1/8" = 1'–0"
PLAN

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G ROAD BRIDGE REPLACEMENT
MECHANICALLY STABILIZED BACKFILL

B33
108

PLUMBING SYMBOL LEGEND

ANNOTATION SYMBOLS

##	KEYNOTE TAG
##	REVISION TAG
AA-#-###	EQUIPMENT TAG REFER TO EQUIPMENT SCHEDULE
AA-#-###	REFERENCE EQUIPMENT TAG SPECIFIED BY ANOTHER DISCIPLINE

LINETYPES / PHASING

	NEW, OR OTHER ACTION ITEMS *(Solid dark lines)*
	ITEMS TO BE DEMOLISHED *(Dashed dark lines on demo plans)*
reference info	EXISTING ITEMS TO REMAIN *(Solid light lines and text)*
	CONNECT NEW TO EXISTING

SYSTEM TYPE ABBREVIATIONS

W	WASTE
GW	GREASE WASTE
SO	SAND/OIL
NG	NATURAL GAS (7"-14")
G2PSI	NATURAL GAS (2 PSI)
SD	STORM DRAIN
OD	OVERFLOW STORM DRAIN
V	VENT
PW	PUMPED WASTE
IW	INDIRECT WASTE

PIPING LINE TYPES

VENT

SYSTEM TYPE — SUPPLY / DRAIN

SYSTEM TYPE — RETURN

SYSTEM TYPE — BELOW GRADE

PLUMBING SPECIFICATIONS

PIPING MATERIAL AND FITTINGS (WITHIN SUMP BASIN):

1. STORM DRAIN PIPING:
   A. GRAVITY AND FORCED
      a. BELOW GRADE: SCHEDULE 40 PVC W/SOLVENT WELDED JOINTS.

ADOPTED CODES

AHJ	MESA COUNTY
LOCAL AMENDMENTS	CURRENT
IBC	2018
IPC	2018

DESIGN CRITERIA

SITE ELEVATION	4500 FEET A.S.L.
DESIGN RAINFALL	1.36 INCHES / HOUR
AREA	3185 SQ.FT
DURATION	1 HR

SUMP PUMP SYSTEM COMPONENTS SCHEDULE

TAG	NAME	MANUFACTURER & MODEL	DESCRIPTION
CP-1	CONTROL PANEL	ZOELLER 10-1044	ELECTRICAL ALTERNATOR CONTROL PANEL FOR DUPLEX INSTALLATIONS. NEMA 4X ENCLOSURE, HOA SWITCH, HIGH WATER ALARM, CIRCUIT BREAKER FOR EACH PUMP, MAGNETIC STARTER. FURNISHED WITH THREE(3) 20 FT. LONG FLOAT SWITCHES. ALTERNATING LEAD / LAG OPERATION.
RS-1	RAIL SYSTEM	ZOELLER 39-0132	POWDER COATED, DUCTILE IRON WITH STAINLESS STEEL UPPER RAIL SUPPORT BRACKET AND LIFTING BAIL.

SUMP PUMP (DUPLEX) SCHEDULE

EQUIPMENT TAG	MFR.	MODEL	SERVICE	LOCATION	FLOW RATE (GPM)	TOTAL DYNAMIC HEAD (FT. WATER COLUMN)	OUTLET PIPE CONNECTION SIZE (IN)	MAXIMUM OPERATING TEMPERATURE (°F)	ELECTRICAL					REMARKS
									V	PH	HZ	HP	AMPS	
SP-1	ZOELLER	152	STORM DRAIN	SEE PLANS	25	34	1-1/2	130	230	1	60	4/10	4.3	ALL
SP-2	ZOELLER	152	STORM DRAIN	SEE PLANS	25	34	1-1/2	130	230	1	60	4/10	4.3	ALL

REMARKS:
1. SYSTEM SHALL BE PRE-PLUMBED, FURNISHED WITH RAIL SYSTEM, LIFTING CABLES, CHECK AND BALL VALVES.
2. FURNISH WITH CONTROL PANEL ALARM, FLOAT SWITCHES, AND FLOAT SWITCHES BRACKET, NEMA 4X ENCLOSURE, HOA SWITCH, NON-SPARKING DISCONNECT.

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

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SCALES: PLAN

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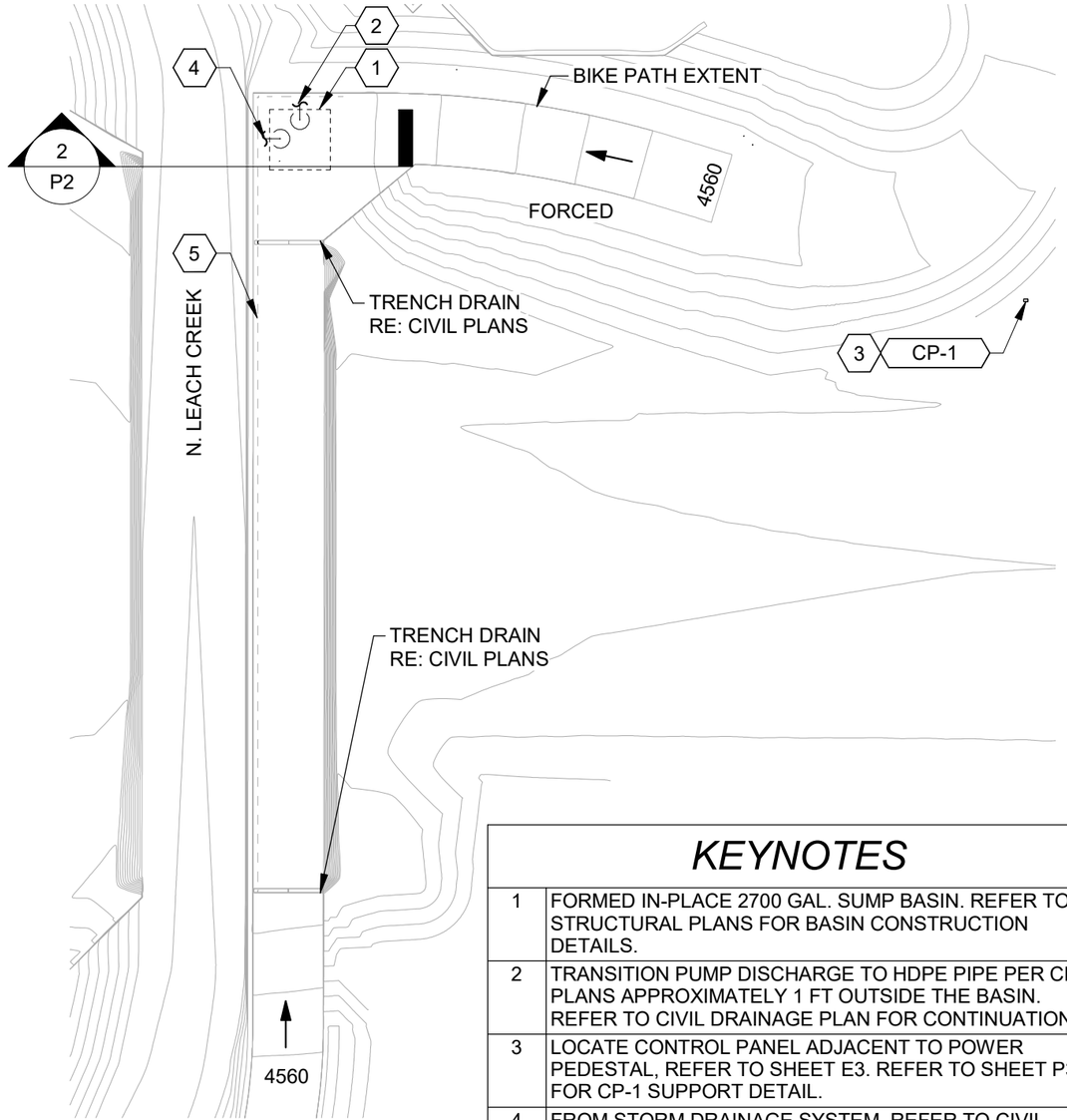
G ROAD BRIDGE REPLACEMENT
PLUMBING LEGEND

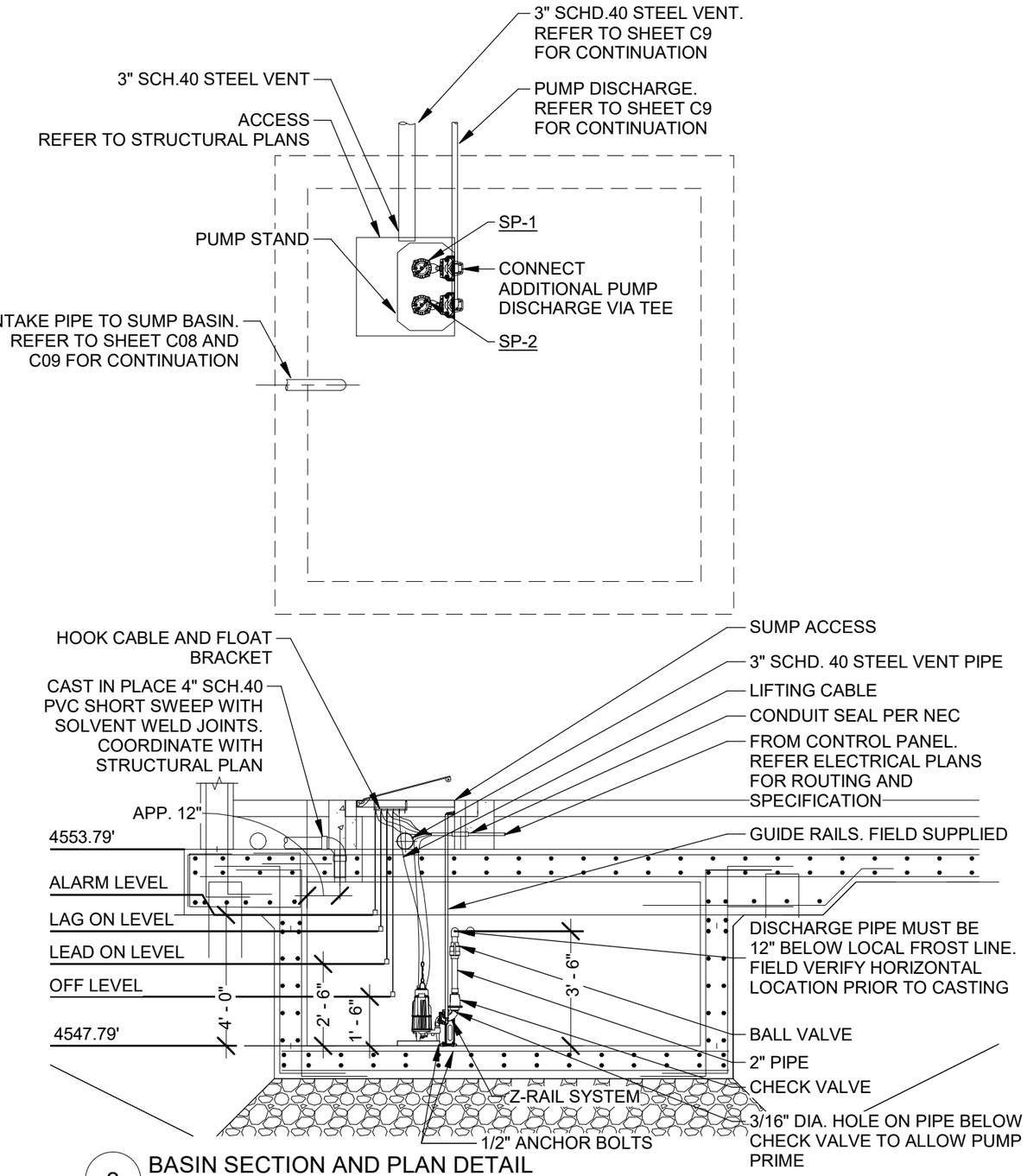


KEYNOTES

1	FORMED IN-PLACE 2700 GAL. SUMP BASIN. REFER TO STRUCTURAL PLANS FOR BASIN CONSTRUCTION DETAILS.
2	TRANSITION PUMP DISCHARGE TO HDPE PIPE PER CIVIL PLANS APPROXIMATELY 1 FT OUTSIDE THE BASIN. REFER TO CIVIL DRAINAGE PLAN FOR CONTINUATION.
3	LOCATE CONTROL PANEL ADJACENT TO POWER PEDESTAL, REFER TO SHEET E3. REFER TO SHEET P3 FOR CP-1 SUPPORT DETAIL.
4	FROM STORM DRAINAGE SYSTEM. REFER TO CIVIL PLANS FOR CONTINUATION.
5	STORM DRAINAGE SYSTEM PER CIVIL PLANS. SHOWN HERE FOR REFERENCE ONLY.

1 BIKE PATH PLUMBING PLAN

SCALE: 1" = 30'-0"



2 BASIN SECTION AND PLAN DETAIL

SCALE: 1/4" = 1'-0"

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

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PROJECT NO. 2020-385.001

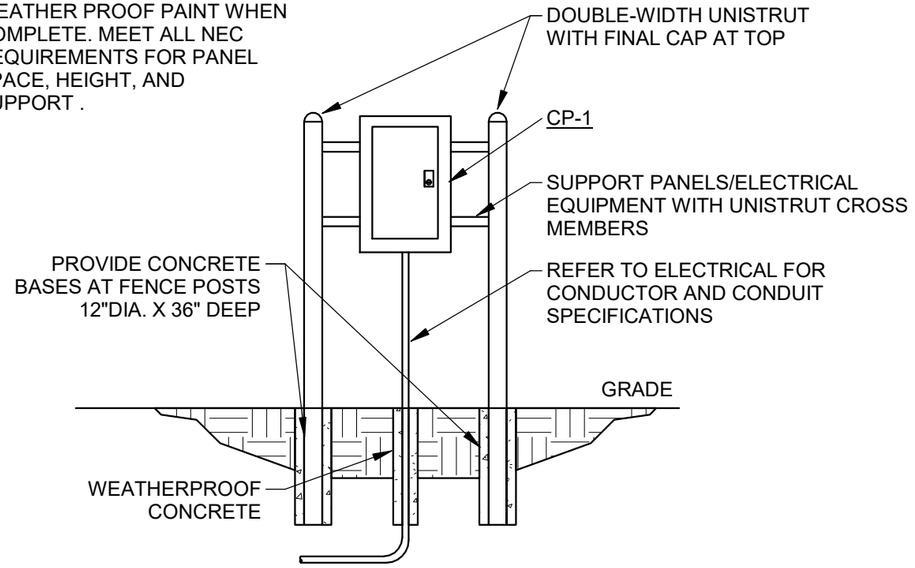
G ROAD BRIDGE REPLACEMENT
BIKE PATH LIFT STATION

P2
110

4/6/2021 3:55:38 PM

\\sgmjiserv3\projects\2020\2020-385-NLeachCrkBridge\001-StructEng\H-Dwgs\Mep\Revit\GRoadBridgeReplacement_MEP_R19.rvt

NOTE:
PROVIDE COMPLETE STRUCTURE, CONCRETE AND FABRICATION. PROVIDE ALL MATERIAL IN GALVANIZED OR WEATHER PROOF PAINT WHEN COMPLETE. MEET ALL NEC REQUIREMENTS FOR PANEL SPACE, HEIGHT, AND SUPPORT .



1 CONTROL PANEL SUPPORT DETAIL

NO SCALE

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

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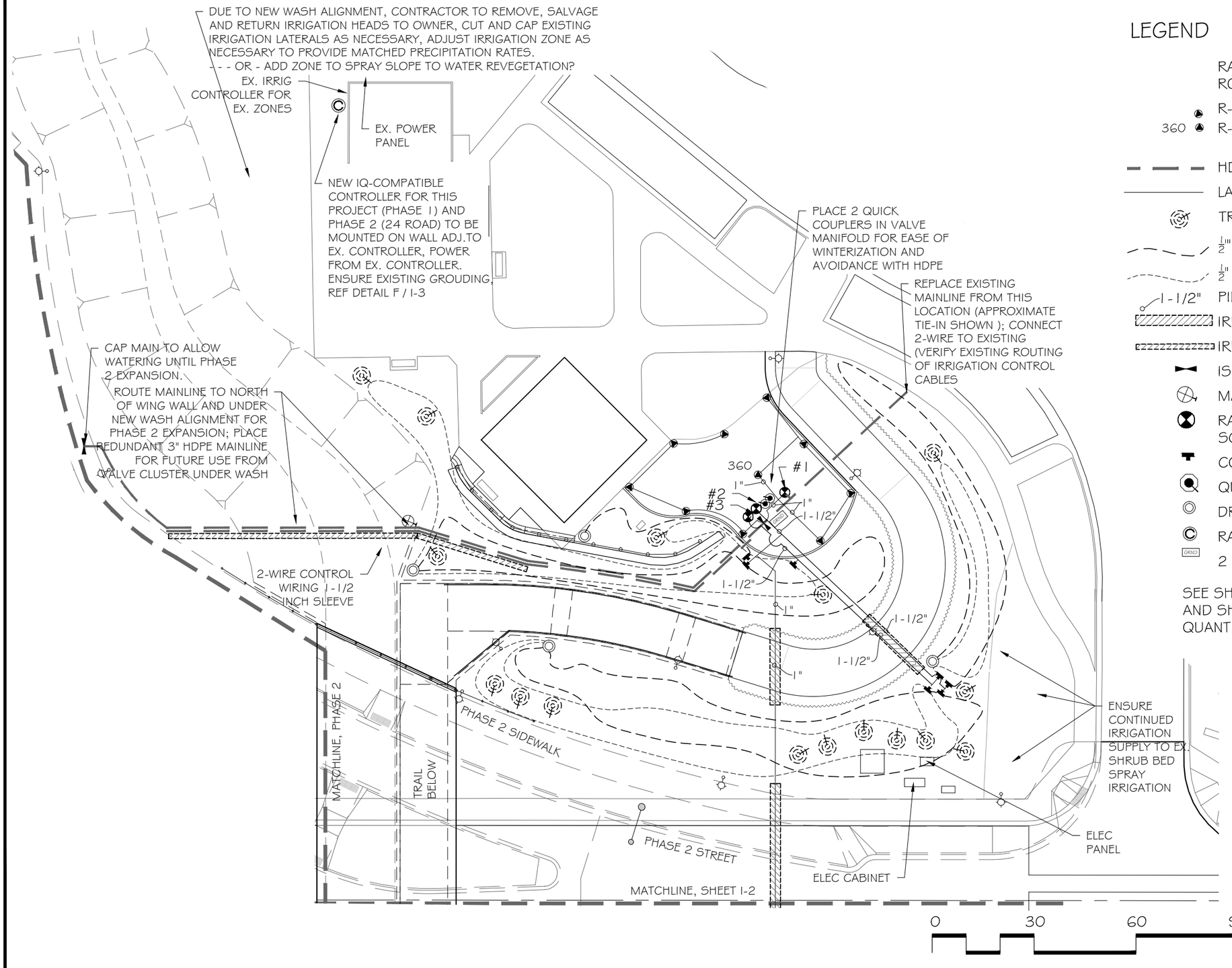
G ROAD BRIDGE REPLACEMENT
PLUMBING DETAILS



LEGEND

- RAINBIRD 1804 SERIES SPRAYHEAD WITH R-VAN ROTARY NOZZLE
- R-VAN 24 NOZZLE
- 360 R-VAN 24 360 NOZZLE
- HDPE MAIN, 3" UNLESS NOTED OTHERWISE
- LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
- TREE RING DRIPPER LINE DETAIL B/I-3
- ½" DRIP TUBE-FOR SHRUB ZONE
- ½" DRIP TUBE-FOR TREE ZONE
- 1-1/2" PIPE SIZING
- IRRIGATION SLEEVE, 4"
- IRRIGATION SLEEVE, 1-1/2" FOR CONTROL WIRES
- ISOLATION VALVE DETAIL C/I-3
- MANUAL DRAIN VALVE DETAIL B/I-3
- RAINBIRD PES-B ZONE VALVE, SIZE PER VALVE SCHEDULE DETAIL A/I-3
- COMPRESSION "T" FITTING
- QUICK COUPLER VALVE DETAIL D/I-3
- DRIP ZONE FLUSH BOX DETAIL A/I-4
- RAINBIRD ESP-LXD IRRIGATION CONTROLLER
- GRND 2 WIRE GROUNDING: DETAIL A/I-3

SEE SHEET I-2 FOR IRRIGATION SHEET NOTES AND SHEETS I-3 AND I-4 FOR DETAILS, QUANTITIES AND VALVE SCHEDULE.

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY	MH	DATE	4-7-2021
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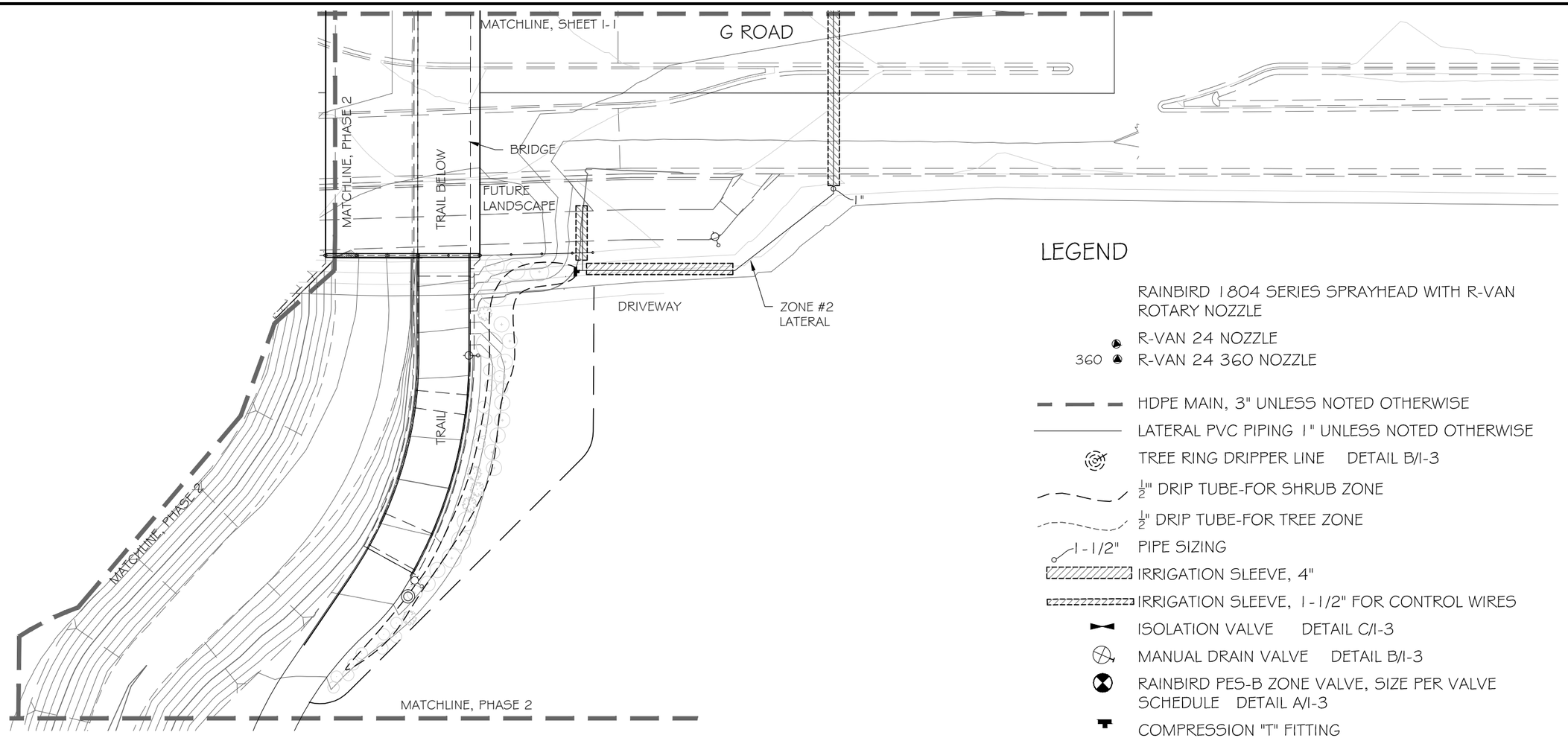
APPROVED BY	CR	DATE	4-7-2021

SCALES

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903

G ROAD BRIDGE REPLACEMENT PROJECT
-PHASE ONE IRRIGATION PLAN I-1



LEGEND

- RAINBIRD 1804 SERIES SPRAYHEAD WITH R-VAN ROTARY NOZZLE
- R-VAN 24 NOZZLE
- 360 R-VAN 24 360 NOZZLE
- HDPE MAIN, 3" UNLESS NOTED OTHERWISE
- LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
- TREE RING DRIPPER LINE DETAIL B/I-3
- ½" DRIP TUBE-FOR SHRUB ZONE
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- 1-1/2" PIPE SIZING
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- COMPRESSION "T" FITTING
- QUICK COUPLER VALVE DETAIL D/I-3
- DRIP ZONE FLUSH BOX DETAIL A/I-4
- RAINBIRD ESP-LXD IRRIGATION CONTROLLER

SEE SHEET I-2 FOR IRRIGATION SHEET NOTES AND SHEETS I-3 AND I-4 FOR DETAILS, QUANTITIES AND VALVE SCHEDULE.

IRRIGATION NOTES:

1. ALL WORK SHALL BE PER EXISTING COUNTY OR STATE CODE AND IS SUBJECT TO INSPECTION AND APPROVAL BY APPROPRIATE INSPECTORS AND THE OWNER'S REPRESENTATIVE.
2. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. ALL LATERAL AND MAIN LINES IN SYSTEM WILL BE CONTAINED IN SLEEVES WHEREVER CONCRETE IS TO BE OVERLAID.
4. POWER TO IRRIGATION CONTROLLER TO BE PROVIDED BY LICENSED ELECTRICIAN.
5. CONTRACTOR TO VERIFY LOCATION OF IRRIGATION CABLE AND CONTROL WIRES AND SALVAGE AND REPLACE WHERE NECESSARY. CONNECT NEW IRRIGATION VALVES TO NEW ESP-LXD CONTROLLER ON HANDBALL COURT WALL. ENSURE CONTINUED SUPPLY AND CONTROL TO EXISTING IRRIGATION ZONES.
6. MAXIMUM LENGTH OF SWING PIPE ON ALL HEADS SHALL BE 10 FT., MINIMUM LENGTH SHALL BE 2 FT.
7. ALL MAINS SHALL BE BURIED AT A MINIMUM DEPTH OF 24 IN. ALL LATERALS AT A DEPTH OF 18 IN. ALL VALVE WIRING SHALL BE BUNDLED BY TAPING AT 25 FT. INTERVALS AND PLACED BELOW IRRIGATION PIPING FOR PROTECTION, OR IN SLEEVE WHERE SPECIFIED.
8. CONTRACTOR TO INSTALL MANUAL DRAIN VALVES AT LOW POINT ON ALL MAIN LINES.
9. SEE SHEETS I-3 AND I-4 FOR DETAILS.
10. SYSTEM IS DESIGNED TO OPERATE AT 50 PSI, PROVIDING MINIMUM 35 PSI AT HEADS.
11. WHERE IRRIGATION IS TO BE LOCATED ADJACENT TO FENCING OR WALLS, LATERALS SHALL BE LOCATED 12 INCHES FROM BACK OF WALL AND 3 INCHES FROM FACE OF FENCE.
12. DRIP EMITTERS TO BE NETAFIM PC DRIPPER, 1 GPM FOR SHRUBS, PERENNIALS AND GRASSES ZONE; NETAFIM TECHLINE DRIP TUBING FOR TREE ZONE WITH RINGS PER DETAIL, NO SEPARATE PC DRIPPERS ON TREES.
13. PIPE FROM CONTROL VALVE TO FIRST " TEE" TO USE 1/2" LARGER THAN VALVE UNLESS NOTED OTHERWISE
14. PIPE SIZE NOTATION INDICATES MINIMUM PIPE SIZE DOWNSTREAM FROM THAT POINT.

0 30 60 90

NORTH

N W E S

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY MH DATE 4-7-2021
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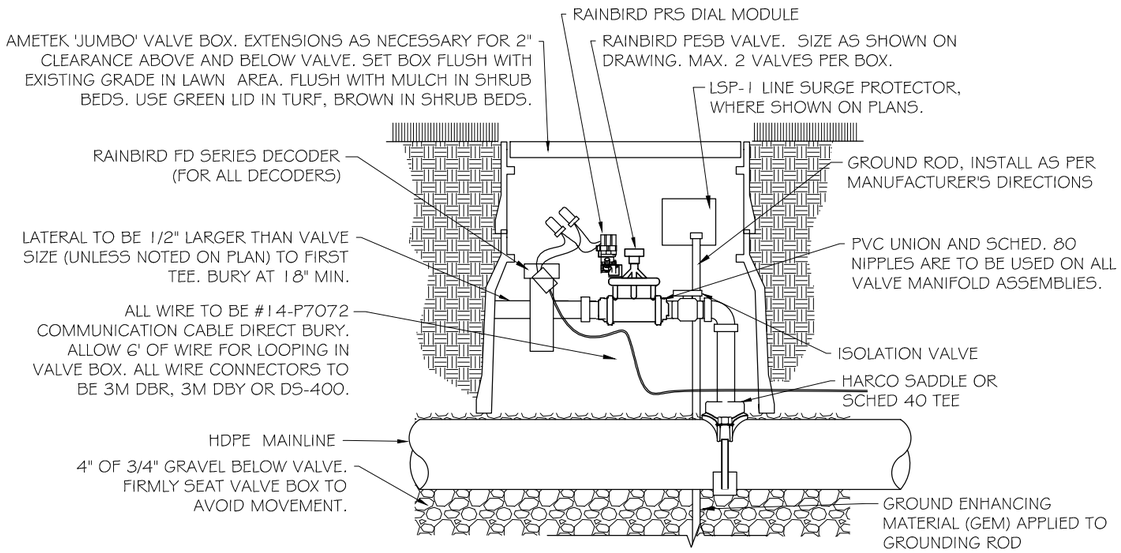
SCALES

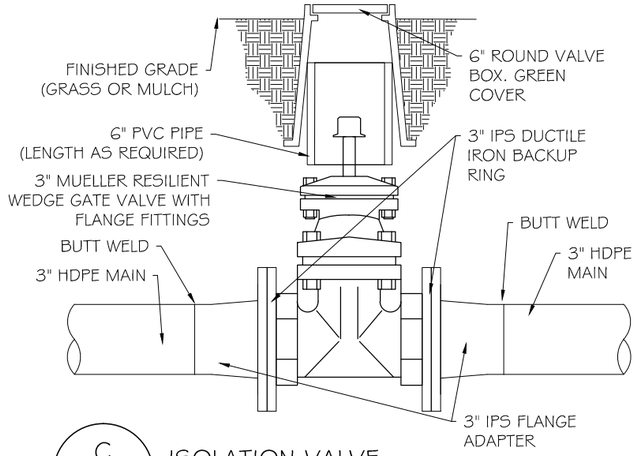
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903

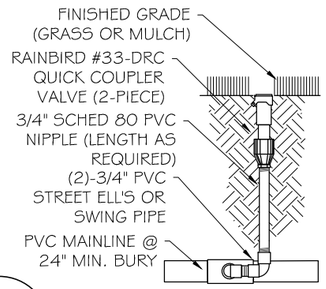
G ROAD BRIDGE REPLACEMENT PROJECT
PHASE ONE IRRIGATION PLAN I-2



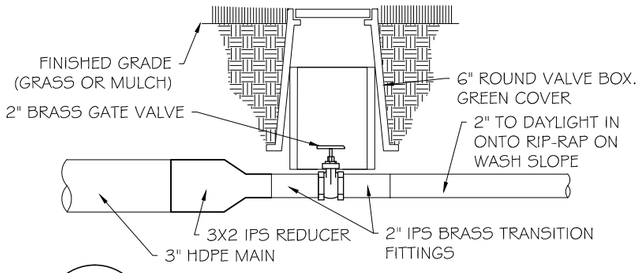
A / I-3 RAINBIRD PESB-PRS-D VALVE
NOT TO SCALE



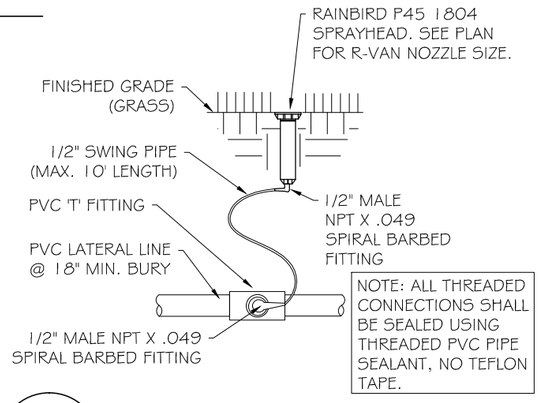
C / I-3 ISOLATION VALVE
NOT TO SCALE



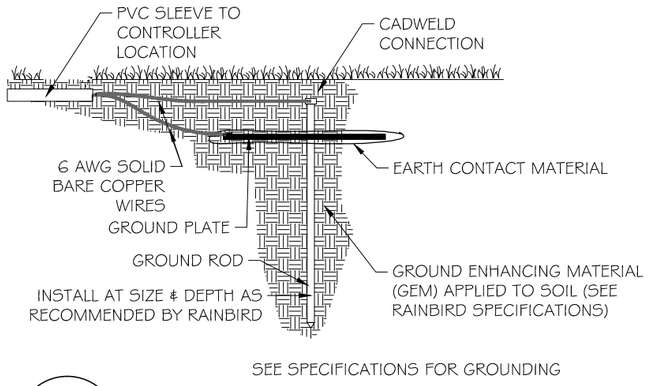
D / I-3 QUICK COUPLER VALVE
NOT TO SCALE



B / I-3 MANUAL DRAIN VALVE
NOT TO SCALE



E / I-3 RAINBIRD 1804 SPRAYHEAD W/R-VAN NOZZLE
NOT TO SCALE



E / I-3 GROUNDING PLATE & GROUNDING ROD
NOT TO SCALE

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

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REVISION △	–
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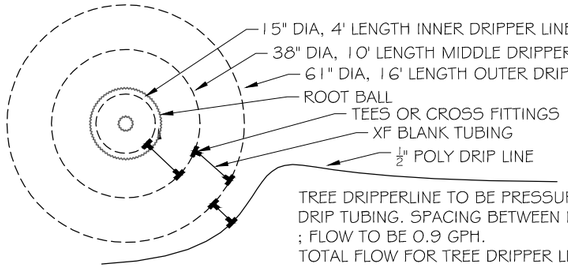
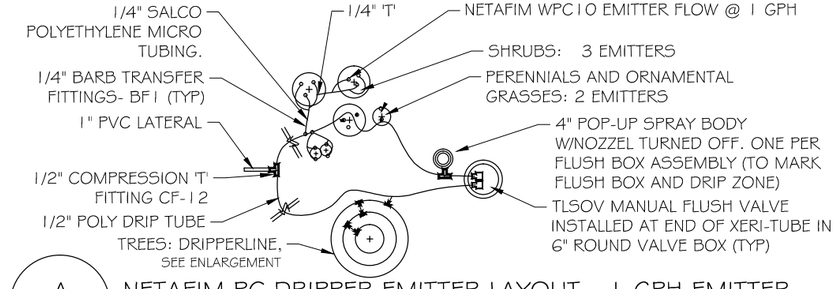
G ROAD BRIDGE REPLACEMENT PROJECT
PHASE ONE IRRIGATION PLAN I-3



TREE DRIPPERLINE ENLARGEMENT

TUBING PLACEMENT AND LIMITS	EMITTER PLACEMENT	FLUSHBOX LOCATION
1/2" DISTRIBUTION TUBE: MAX. 200 GPH PER LENGTH (200 EMITTERS) LESS 27 GPH PER TREE. MAX. 200' LENGTH. EACH BRANCH TO END WITH FLUSH CAP IN 6" ROUND VALVE BOX. 1/4" DISTRIBUTION TUBE: MAX. 12 GPH PER LENGTH (12 EMITTERS). MAX. 10' LENGTH. CONNECTION WITH 1/2" TUBE TO BE 1/4" COUPLER, NOT PC DRIPPER. ALL TUBING TO BE PLACED BELOW WEED CONTROL FABRIC (WHERE FABRIC OCCURS). TUBING TO BE STAKED AT EMITTER AND AT MAX 5' INTERVALS WITH MIN. 8" STAPLES. 1/4" TUBING TO BE SALCO POLYETHYLENE MICRO TUBING.	ALL EMITTERS ARE TO BE PLACED AND STAKED AT PERIMETER OF ROOT BALL. EVENLY SPACE EMITTERS AROUND ROOT BALL PERENNIALS AND ORNAMENTAL GRASSES: TWO (2) PC DRIPPERS PER PLANT SHRUBS: THREE(3) PC DRIPPERS PER PLANT TREES: 3 DRIPPER LINE RINGS:7-1/2", 19" & 30" FROM CENTER OF ROOTBALL, TUBE IS TECHLINE CV, 12" DRIPPER SPACING, 0.9 GPH INLINE EMITTERS, 27 GPH PER TREE	MINIMIZE NUMBER OF FLUSH BOXES. LOCATE ADJACENT TO WALKS OR DRIVES FOR MAINTENANCE ACCESS. INSTALL 1800 SPRAY W/NOZZLE CLOSED. SPRAY HEAD IS TO INDICATE WHEN ZONE IS ON AND LOCATION OF FLUSH BOX.



A / 1-4 NETAFIM PC DRIPPER EMITTER LAYOUT - 1 GPH EMITTER

NOT TO SCALE

IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	TYPE	DRIP EMITTERS	GPM	PRECIP RATE	RUN TIME	PGM	NOMINAL INCHES / SETTING	# STARTS / DAY	# WATER DAYS PER WEEK	NET APPLIED INCHES / WEEK
#1	1"	SHELTER LAWN R-VAN		11.07	0.61 IN/HR	35 min	A	0.36 in	4	2	2.0 in
#2	1-1/2"	DRIP - PC DRIPPER -SHRUB	610	10.17	1 gal/emit/hr	64 min	B	1.1 gal	1	3	3.0 gal
#3	1-1/2"	DRIP - DRIP TUBE -TREES	432	7.2	1 gal/emit/hr	64 min	B	1.1 gal	1	3	3.0 gal
		(16 TREES W/27 IN LINE EMTRS/TREE)									

WATER BUDGET SETTINGS	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCT
	90%	100%	130%	160%	120%	90%	70%

NOTES:
1. THIS CHART PROVIDES WATERING SCHEDULE RECOMMENDATIONS FOR ESTABLISHED PLANTS AND TURF.
2. CONTRACTOR IS OBLIGATED TO MONITOR SOIL MOISTURE TO AVOID SATURATION OR DROUGHT AND ADJUST SCHEDULE ACCORDINGLY DURING ESTABLISHMENT PERIOD.
3. TURF ZONES ARE CALCULATED TO 70% EFFICIENCY, DRIP ZONES TO 80% EFFICIENCY.
4. OPTIMUM PRESSURE FOR ZONES: 45 PSI

TABULATION OF IRRIGATION QUANTITIES

ITEM #	BID ITEM	UNIT	QUANTITY
1	4 Inch PVC Irrigation Sleeve	LF	180
2	1-1/2 Inch Irrigation Sleeve	LF	107
3	Power Source Wire	LF	25
4	Irrigation Controller	EACH	1
5	3 Inch HDPE Mainline	LF	460
6	Manual Drain Valve	EACH	1
7	3/4 Inch Quick Coupler Valve	EACH	2
8	1 Inch Automatic Control Valve	EACH	1
9	1-1/2 Inch Automatic Control Valve	EACH	2
10	2-wire Control Wire	LF	325
11	2-wire Control, including decoders, grounding	LS	1
12	Jumbo Valve Box	EACH	2
13	Isolation Valves	EACH	2
14	1 Inch PVC Lateral Pipe	LF	450
15	1-1/2 PVC Lateral Pipe	LF	155
16	4 Inch Pop-Up Spray Sprinkler w/Nozzle	EACH	10
17	Riser Assembly to Compression Tee (not incl. tree rings)	EACH	8
18	1/2" Drip Distribution Tubing	LF	2129
19	Drip Emitter, including 1/4" distribution tubing	EACH	610
20	Tree Ring Assembly	EACH	18
21	1/2 Inch Flush Box Assembly	EACH	5
22	Adjust Existing Lawn Area Irrigation West of Court	LS	1

*Quantities are approximate

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

DESCRIPTION	DATE
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REVISION 2	
REVISION 3	
REVISION 4	

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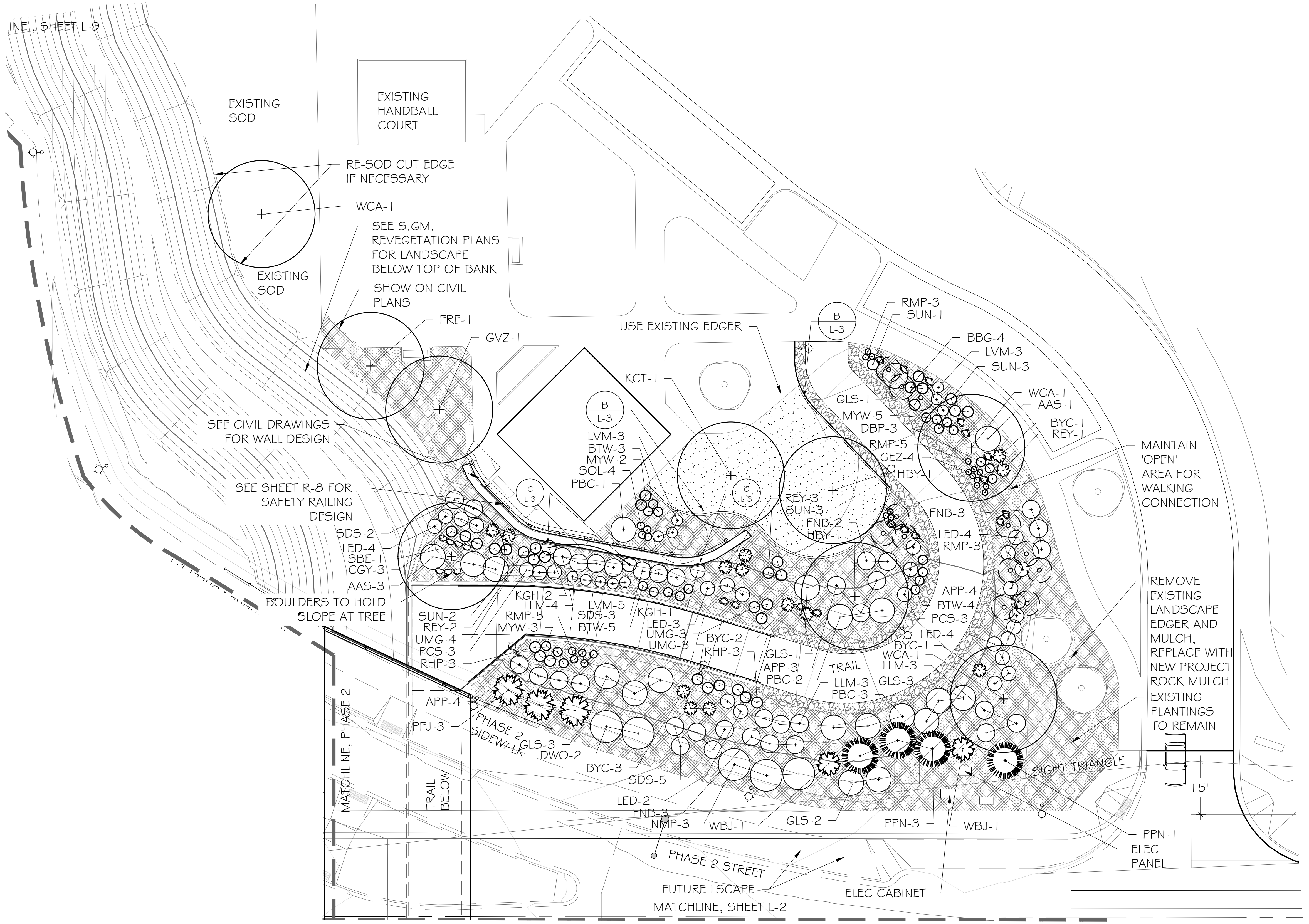
SCALES

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903

G ROAD BRIDGE REPLACEMENT PROJECT
-PHASE ONE IRRIGATION PLAN 1-4



LANDSCAPE LEGEND

- SHADE TREE
- ORNAMENTAL TREE
- EVERGREEN TREE
- EXISTING TREE TO REMAIN
- PROPOSED ASPEN ART, BY OTHERS
- DECIDUOUS SHRUBS
- EVERGREEN SHRUBS
- PERENNIALS
- SHRUB BED, 1-1/2 INCH TAN GRANITE (NO WEED FABRIC)
- SHRUB BED, RED CRUSHED GRANITE
- TURF (SOD) WITH CONCRETE EDGER
- LIGHTING; SEE ELECTRICAL
- 1'X1'X2' 2'X2'X3' GRANITE BOULDERS

SEE SHEET L-2 FOR PLANTING SHEET NOTES AND SHEETS L-3 & L-4 FOR DETAILS AND PLANT LIST.

N W E S

0 30 60 90

NORTH

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

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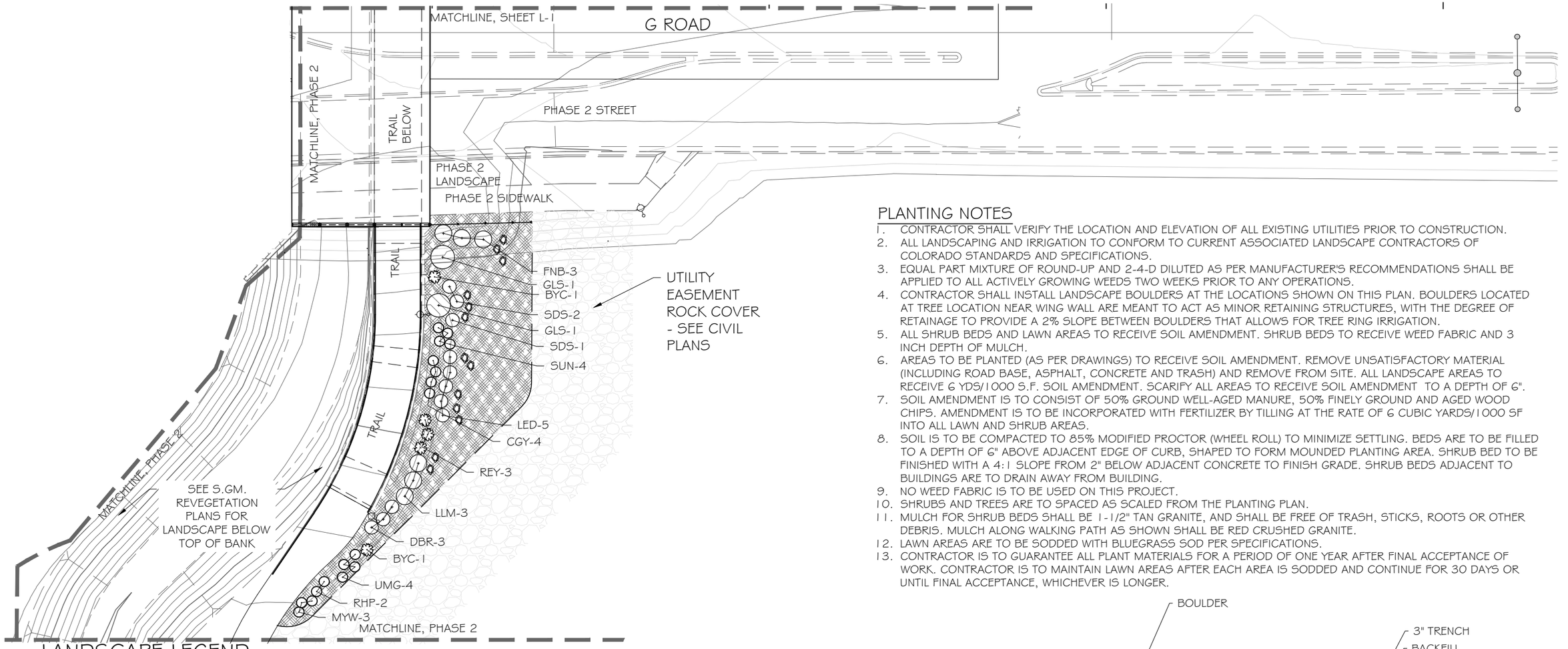
PUBLIC WORKS ENGINEERING DIVISION
PROJECT NO. 207-F1903

G ROAD BRIDGE REPLACEMENT PROJECT –PHASE 1 LANDSCAPE PLAN L–1



PLANTING NOTES

1. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. ALL LANDSCAPING AND IRRIGATION TO CONFORM TO CURRENT ASSOCIATED LANDSCAPE CONTRACTORS OF COLORADO STANDARDS AND SPECIFICATIONS.
3. EQUAL PART MIXTURE OF ROUND-UP AND 2-4-D DILUTED AS PER MANUFACTURER'S RECOMMENDATIONS SHALL BE APPLIED TO ALL ACTIVELY GROWING WEEDS TWO WEEKS PRIOR TO ANY OPERATIONS.
4. CONTRACTOR SHALL INSTALL LANDSCAPE BOULDERS AT THE LOCATIONS SHOWN ON THIS PLAN. BOULDERS LOCATED AT TREE LOCATION NEAR WING WALL ARE MEANT TO ACT AS MINOR RETAINING STRUCTURES, WITH THE DEGREE OF RETAINAGE TO PROVIDE A 2% SLOPE BETWEEN BOULDERS THAT ALLOWS FOR TREE RING IRRIGATION.
5. ALL SHRUB BEDS AND LAWN AREAS TO RECEIVE SOIL AMENDMENT. SHRUB BEDS TO RECEIVE WEED FABRIC AND 3 INCH DEPTH OF MULCH.
6. AREAS TO BE PLANTED (AS PER DRAWINGS) TO RECEIVE SOIL AMENDMENT. REMOVE UNSATISFACTORY MATERIAL (INCLUDING ROAD BASE, ASPHALT, CONCRETE AND TRASH) AND REMOVE FROM SITE. ALL LANDSCAPE AREAS TO RECEIVE 6 YDS/1000 S.F. SOIL AMENDMENT. SCARIFY ALL AREAS TO RECEIVE SOIL AMENDMENT TO A DEPTH OF 6".
7. SOIL AMENDMENT IS TO CONSIST OF 50% GROUND WELL-AGED MANURE, 50% FINELY GROUND AND AGED WOOD CHIPS. AMENDMENT IS TO BE INCORPORATED WITH FERTILIZER BY TILLING AT THE RATE OF 6 CUBIC YARDS/1000 SF INTO ALL LAWN AND SHRUB AREAS.
8. SOIL IS TO BE COMPACTED TO 85% MODIFIED PROCTOR (WHEEL ROLL) TO MINIMIZE SETTLING. BEDS ARE TO BE FILLED TO A DEPTH OF 6" ABOVE ADJACENT EDGE OF CURB, SHAPED TO FORM MOUNDED PLANTING AREA. SHRUB BED TO BE FINISHED WITH A 4:1 SLOPE FROM 2" BELOW ADJACENT CONCRETE TO FINISH GRADE. SHRUB BEDS ADJACENT TO BUILDINGS ARE TO DRAIN AWAY FROM BUILDING.
9. NO WEED FABRIC IS TO BE USED ON THIS PROJECT.
10. SHRUBS AND TREES ARE TO SPACED AS SCALED FROM THE PLANTING PLAN.
11. MULCH FOR SHRUB BEDS SHALL BE 1-1/2" TAN GRANITE, AND SHALL BE FREE OF TRASH, STICKS, ROOTS OR OTHER DEBRIS. MULCH ALONG WALKING PATH AS SHOWN SHALL BE RED CRUSHED GRANITE.
12. LAWN AREAS ARE TO BE SODDED WITH BLUEGRASS SOD PER SPECIFICATIONS.
13. CONTRACTOR IS TO GUARANTEE ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF WORK. CONTRACTOR IS TO MAINTAIN LAWN AREAS AFTER EACH AREA IS SODDED AND CONTINUE FOR 30 DAYS OR UNTIL FINAL ACCEPTANCE, WHICHEVER IS LONGER.

LANDSCAPE LEGEND

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- DECIDUOUS SHRUBS
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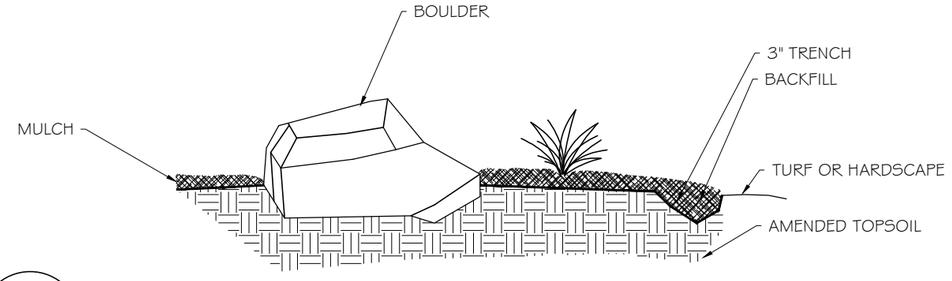
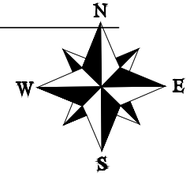
- SHRUB BED, RED CRUSHED GRANITE
- TURF (SOD) WITH CONCRETE EDGER
- LIGHTING; SEE ELECTRICAL
- GRANITE BOULDERS 1'X1'X2' 2'X2'X3'

SEE SHEET L-2 FOR PLANTING SHEET NOTES AND SHEETS L-3 & L-4 FOR DETAILS AND PLANT LIST.



A / L-2 DECORATIVE BOULDER PLACEMENT
NOT TO SCALE



0 30 60 90

NORTH

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

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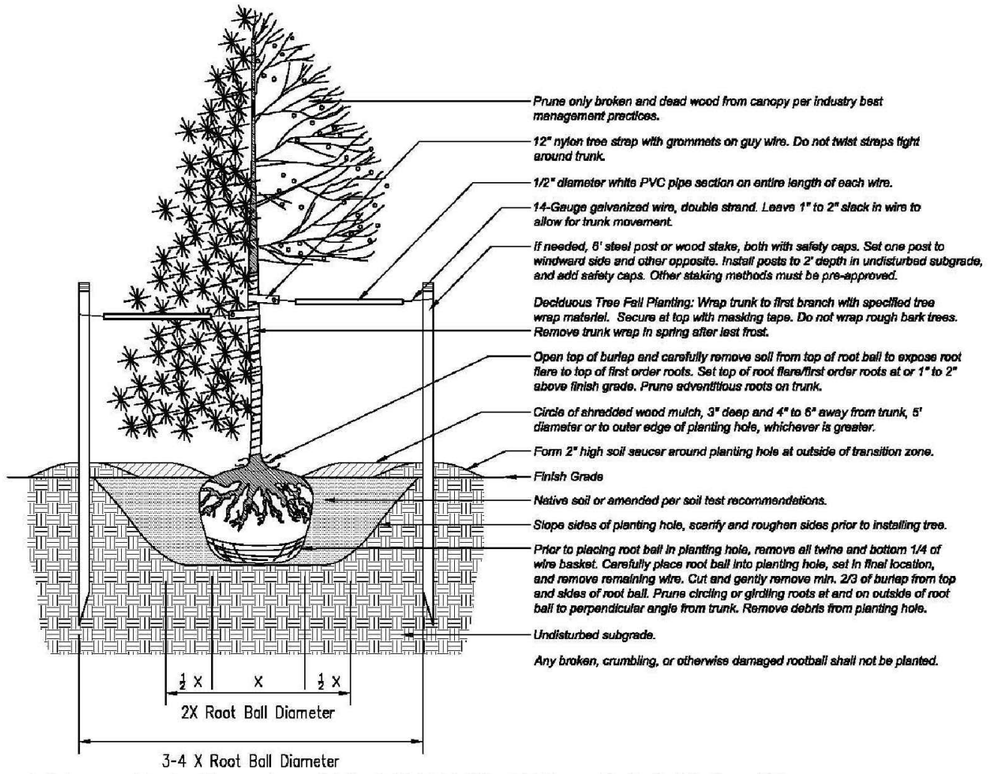
ENGINEERING DIVISION
PROJECT NO. 207-F1903

G ROAD BRIDGE REPLACEMENT PROJECT
– PHASE 1 LANDSCAPE PLAN L-2

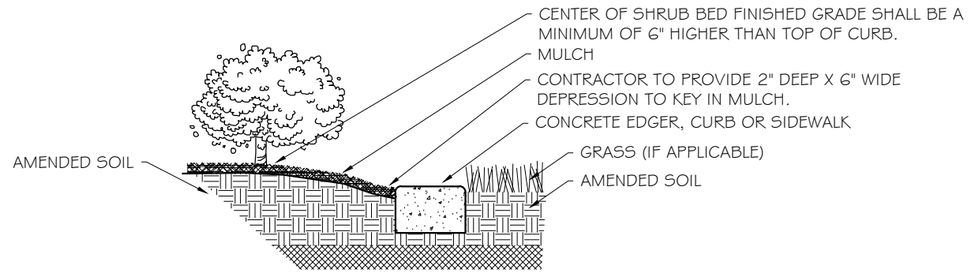


Trees planted upon park land, public property, or within the Public Right of Way (PRW) are subject to the following restrictions:

- Prior to digging, the Utility Notification Center of Colorado shall be contacted at 811 to locate underground utilities
- A planting permit from the Grand Junction City Forester (GJCF) is required regardless of approved plans to ensure the City is available to inspect the planting of public trees.
- Tree planting shall not occur when daytime temperatures reach or exceed 90–degrees Fahrenheit, unless approved GJCF.
- Only tree species approved by the GJCF shall be planted.
- Trees shall not be planted in tree lawns less than six feet wide unless authorized by the GJCF.
- Trees shall be centered in tree lawns and/or planting areas. Where sidewalks are not present, trees shall be loca as designated by the GJCF.
- Unless authorized by the GJCF, trees shall be located:
  - Outside street intersection sight distance triangle, measured 30 (thirty) feet along the PRW in each direction fr the corner.
  - Min. 10 (Ten) feet from alleys and driveways
  - Min. 20 (Twenty) feet from stop signs and curb ramps
  - Min. 25 (Twenty–five) feet from street lights
  - Min. 10 (Ten) feet from electric/gas/water lines, water meters/pits, and fire hydrants
  - Min. 15 (Fifteen) feet from small cell towers
- If overhead utility wires exist, only trees with an expected mature size that meet current clearance regulations ma be planted.
- Tree spacing shall be based on projected mature canopy size and above restrictions, or as approved by the GJCF.
- All electric fixtures and utilities, including but not limited to outlets and lights, shall be located at outside perimet of tree planting areas within hardscape. In tree lawns, fixtures shall be placed minimum 3 (three) feet radially fr base of trunk.

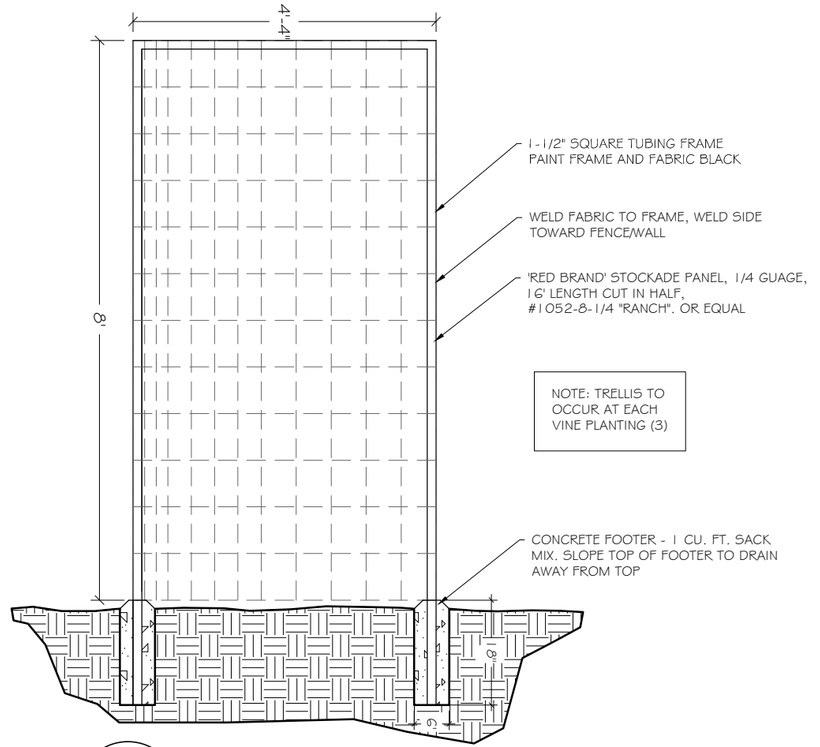
When planting is completed, contact forestry@gjcity.org for final inspection.

A / L-3 PLANTING DETAIL
NOT TO SCALE



NOTES: EDGER OCCURS WHERE INDICATED ON PLAN. ALL CURVES TO BE SMOOTH IN TRANSITION, ALL CORNERS TO BE SQUARE. TOP OF EDGER TO BE SAME AS ADJACENT FINISHED GRADE.

B / L-3 SHRUB BED DETAIL
NOT TO SCALE



C / L-3 VINE TRELLIS
NOT TO SCALE

CIAVONNE, ROBERTS & ASSOCIATES, INC.
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G ROAD BRIDGE REPLACEMENT PROJECT
–PHASE 1 LANDSCAPE PLAN L–3

TABULATION OF LANDSCAPE QUANTITIES

ITEM #	BID ITEM	UNIT	QUANTITY
1	Sod	SF	1750
2	Soil Amendment	SF	17,050
3	1-1/2" Tan Granite Mulch	SF	14,400
4	Red Crushed Granite	SF	900
5	Concrete Edger	LF	125
6	Landscape Boulder	EACH	29
7	Vine Trellis	EACH	3
8	Deciduous Tree (2 Inch Caliper)	EACH	9
9	Deciduous Shrub (1 Gallon Container)	EACH	17
10	Deciduous Shrub (5 Gallon Container))	EACH	92
11	Evgn Tree (Pine, 6 Foot, Ball and Burlap)	EACH	4
11	Evgn Tree (Juniper 6 Foot, Container)	EACH	4
12	Evergreen Shrub (5 Gallon Container))	EACH	18
13	Perennials (1 Gallon Container))	EACH	76
14	Ornamental Grasses (1 Gallon Container)	EACH	25
15	Vines (5 Gallon Container)	EACH	3

PHASE 1 PLANT LIST

Deciduous Trees

Qty	Key	Common Name	Scientific Name	Size	Mature Height
1	FRE	Frontier Elm	Ulmus x Frontier	2"	25-35'
1	GVZ	Green Vase Zelkova	Zelkova serrata 'Green Vase'	2"	40-60'
2	HBY	Hackberry	Celtis occidentalis	2"	35-60'
1	KCT	Kentucky Coffeetree	Gymnocladus dioicus	2"	55-65'
1	SBE	Sensation Box Elder	Acer negundo 'Sensation'	2"	25-40'
2	WCA	Western Catalpa	Catalpa speciosa	2"	45-55'

Evergreen Trees

4	PPN	Pinon Pine	Pinus cembroides edulis	6'	10-15'
3	PFJ	Pathfinder Juniper	Juniperus scopulorum 'Pathfinder'	6'	15-20'
1	WBJ	Wichita Juniper	Juniperus sabina "Wichita"	6'	10-15'

Deciduous Shrubs

4	AAS	Autumn Amber Sumac	Rhus trilobata 'Autumn Amber'	5 gal	1-2'
11	APP	Apache Plume	Fallugia paradoxa	5 gal	3-6'
3	DBR	Dwarf Blue Rabbit Brush	Chrysothamnus nauseosus	5 gal	2-5'
2	DWO	Desert Willow	Chilopsis linearis	5 gal	6-12'
11	FNB	Fern Bush	Chamaebatiaria millefolium	5 gal	4-7'
12	GLS	Gro-low Sumac	Rhus aromatica 'Gro-Low'	5 gal	1.5-2.5'
22	LED	Leadplant	Amorpha canescens	5 gal	2-3'
13	LLM	Littleleaf Mockorange	Philadelphus Microphyllus	5 gal	4-5'
11	LVM	Munstead Lavender	Lavendula 'Munstead'	1 gal	1-2.5'
3	NMP	New Mexico Privet	Forestiera neo-mexicana	5 gal	5-7'
6	PBC	Pawnee Buttes Sand Cherry	Prunus besseyi 'Pawnee Buttes'	5 gal	1-2'
6	PCS	Powis Castle Sage	Artemisia 'Powis Castle'	1 gal	2-2.5'
13	SDS	Sand Sagebrush	Artemisia filifolia	5 gal	3-5'

Evergreen Shrubs

9	BYC	Datil Yucca	Yucca baccata	5 gal	2-4'
9	REY	Red Yucca	Hesperaloe parviflora	5 gal	2-4'

Perennials/Ground Covers

12	BTW	Butterfly Weed	Asclepias tuberosa	1 gal	1.5-3'
7	CGY	Coronation Gold Yarrow	Achillea filipendulina 'Coronation Gold'	1 gal	2-3'
3	DBP	Desert Beardtongue	Penstemon pseudospectabilis	1 gal	2-4'
4	GEZ	Golden Eye Prairie Zinnia	Zinnia Grandiflora	1 gal	0.5-1'
13	MYW	Moonshine Yarrow	Achillea millefolium 'Moonshine'	1 gal	1-2.5'
8	RHP	Red Hot Poker	Kniphofia uvaria 'Pfitzer's Hybrid'	1 gal	2-4'
16	RMP	Rocky Mountain Penstemon	Penstemon strictus	1 gal	0.5-2'
13	SUN	Sunset Hyssop	Agastache rupestris	1 gal	1.5-3'

Ornamental Grasses

4	BBG	Blond Ambition Blue Grama Grass	Bouteloua gracilis 'Blond Ambition'	1 gal	2-3'
7	SOL	Standing Ovation Little Bluestem	Schizachyrium scoparium 'Standing Ovation'	1 gal	2-4'
14	UMG	Undaunted Ruby Muhly Grass	Muhlenbergia reverchonii 'Undaunted'	1 gal	2-3'

Vines

3	KGH	Kintzley's Ghost Honeysuckle	Lonicera reticulata 'Kintzley's Ghost'	5 gal	4-8'

NOTES:
1. PLANT GROWTH CHARACTERISTICS VARY DUE TO ENVIRONMENTAL CONDITIONS, THEREFORE A RANGE OF AVERAGE MATURE HEIGHTS ARE INDICATED.

CIAVONNE, ROBERTS & ASSOCIATES, INC.
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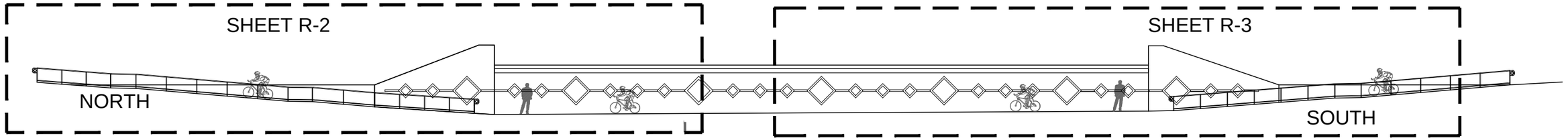
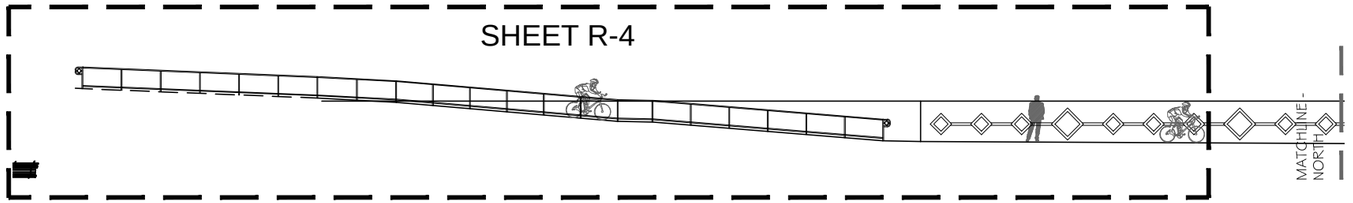
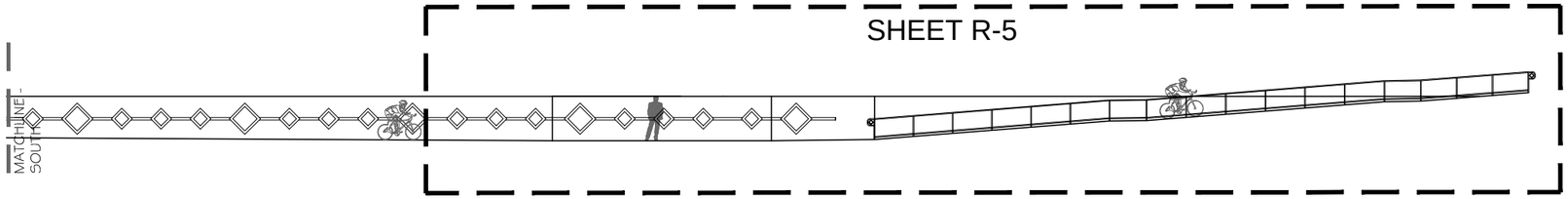
G ROAD BRIDGE REPLACEMENT PROJECT
PHASE 1 LANDSCAPE QUANTITIES, NOTES AND PLANT LIST L-4



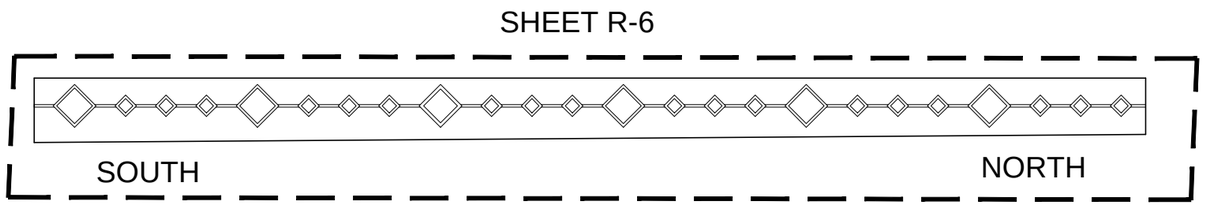
EAST WALL/ABUTMENT 2 ELEVATION



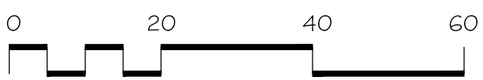
DRY DOCK WALL ELEVATION-SOUTH



DRY DOCK WALL ELEVATION-NORTH



WEST WALL/ABUTMENT 1 ELEVATION



ALL ELEVATIONS ARE AS VIEWED FROM TRAIL
SEE PLAN VIEW, SHEET R-8

CIAVONNE, ROBERTS & ASSOCIATES, INC.
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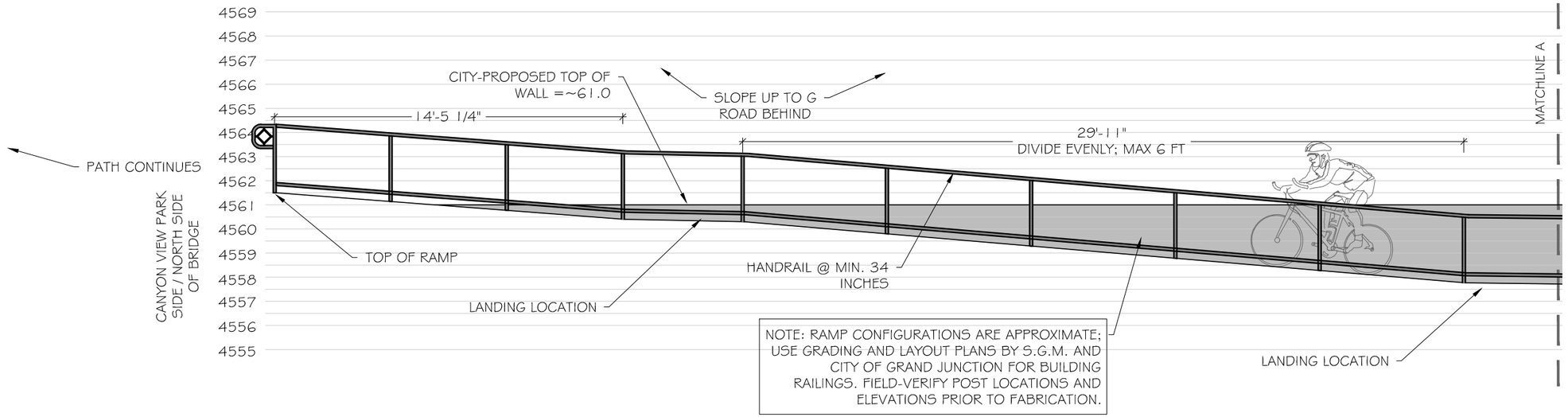
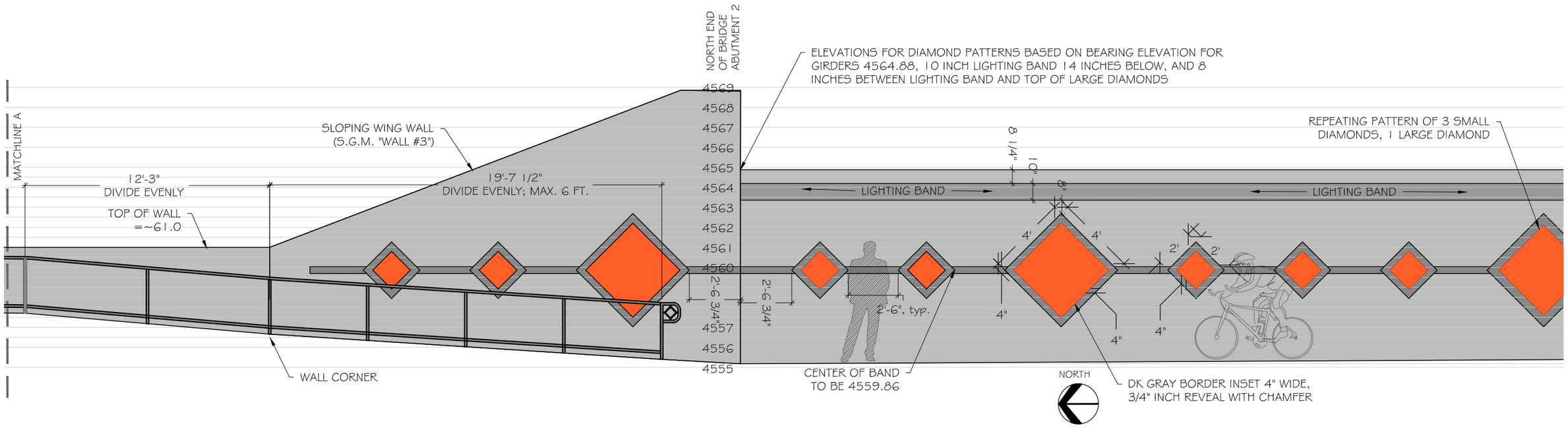
G ROAD BRIDGE REPLACEMENT PROJECT
-PHASE 1 FULL LENGTH
WALLS & RAILINGS R-1





EAST WALL/ABUTMENT 2 - NORTH END

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

DESCRIPTION	DATE
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DRAWN BY MH DATE 4-7-2021
DESIGNED BY MH DATE 4-7-2021
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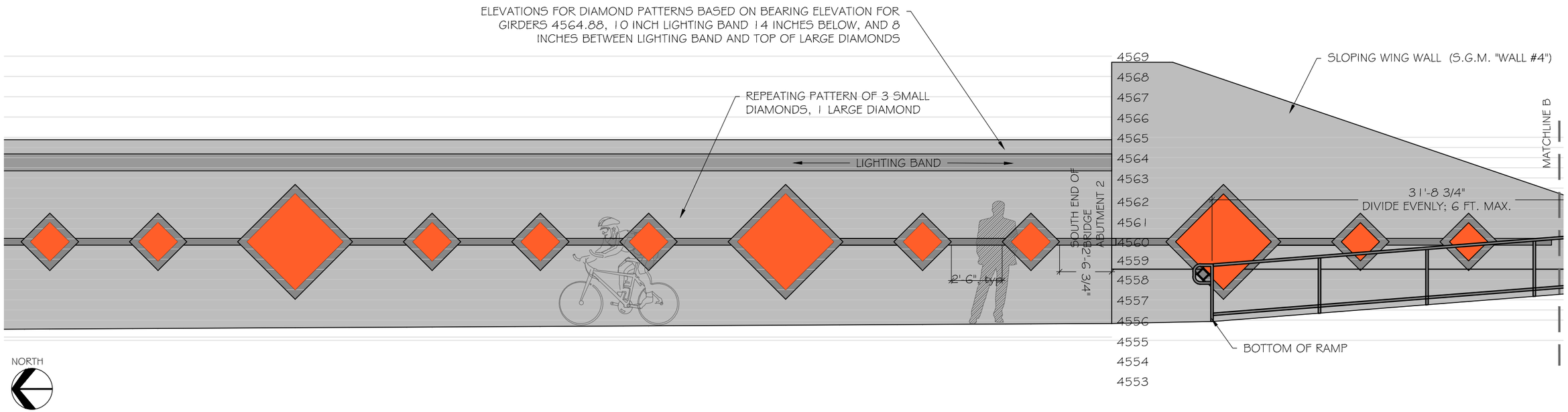
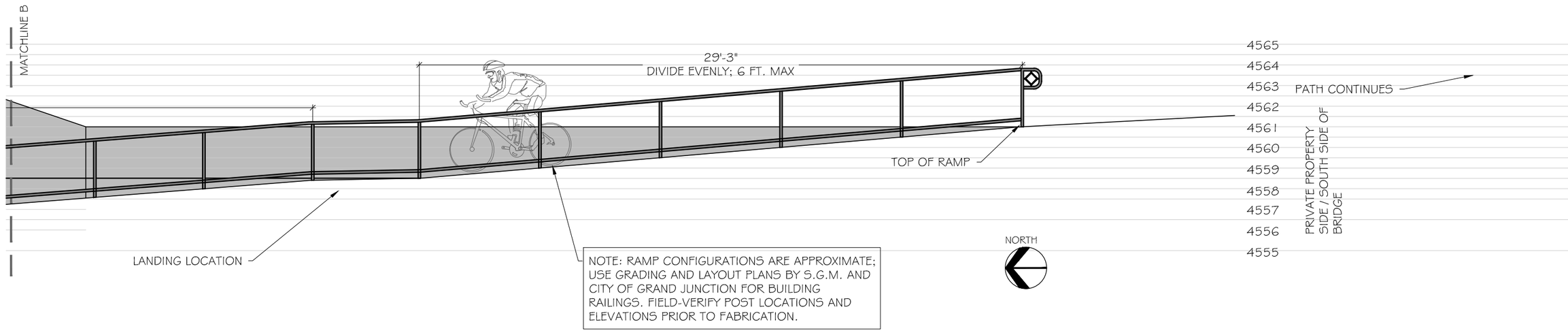
APPROVED BY CR DATE 4-7-2021
SCALES

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903

G ROAD BRIDGE REPLACEMENT PROJECT
–PHASE 1 ABUT. 2 PATTERNS & RAILINGS–NORTH R–2





EAST WALL/ABUTMENT 2 - SOUTH END

CIAVONNE, ROBERTS & ASSOCIATES, INC.
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PUBLIC WORKS
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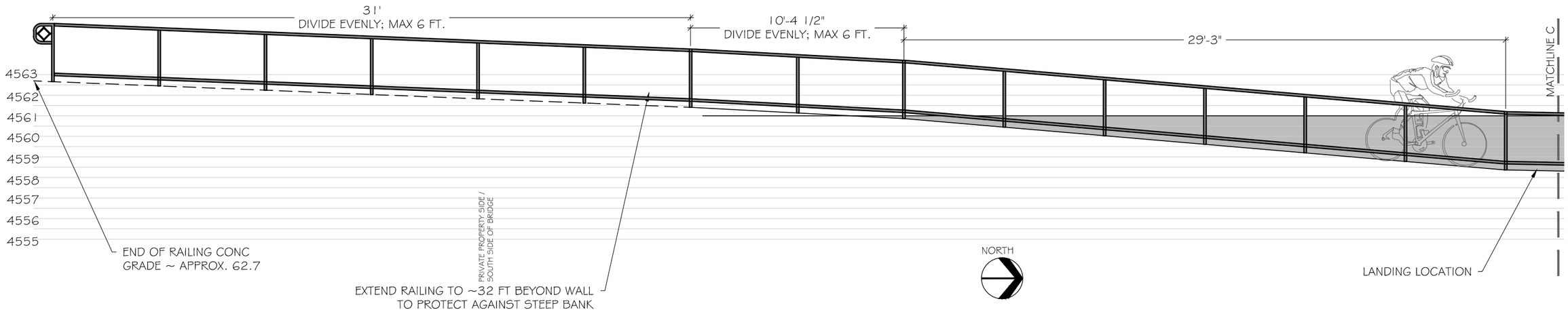
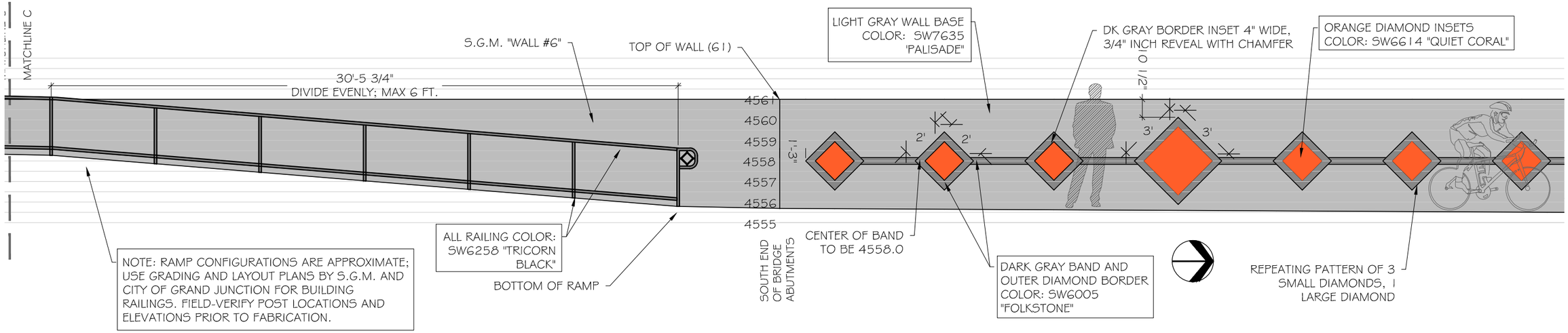
PROJECT NO. 207-F1903

G ROAD BRIDGE REPLACEMENT PROJECT
-PHASE 1 ABUT. 2 PATTERNS
& RAILINGS-SOUTH R-3





DRY DOCK WALL - SOUTH END

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

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APPROVED BY	CR	DATE	4-7-2021

SCALES

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903

G ROAD BRIDGE REPLACEMENT PROJECT
– PHASE 1 DRY DOCK PATTERNS
& RAILINGS – SOUTH R-4

123

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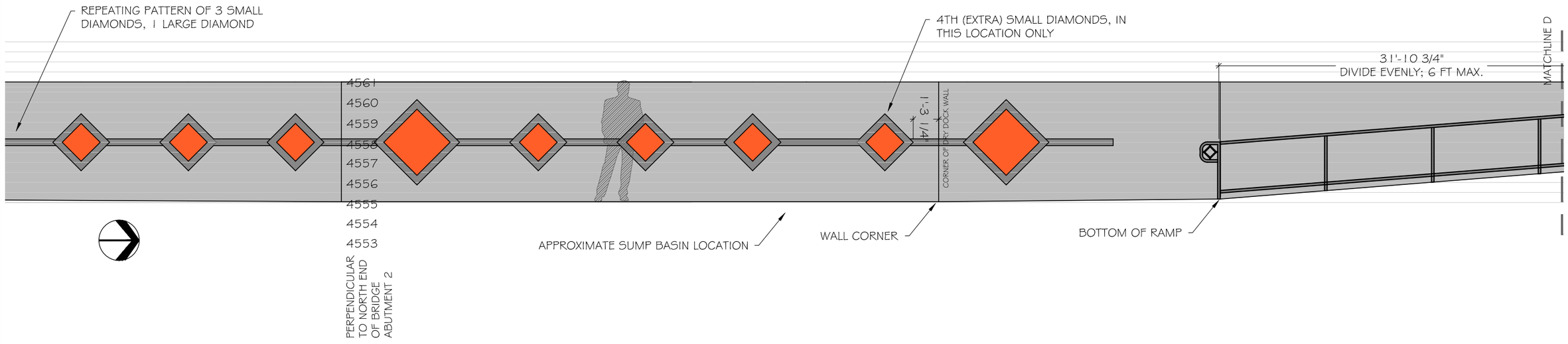

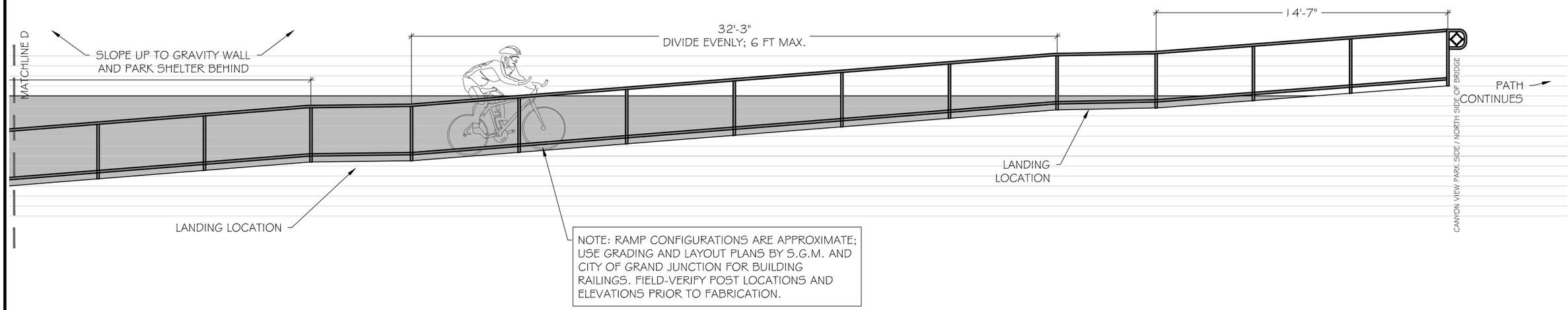

NOTE: RAMP CONFIGURATIONS ARE APPROXIMATE; USE GRADING AND LAYOUT PLANS BY S.G.M. AND CITY OF GRAND JUNCTION FOR BUILDING RAILINGS. FIELD-VERIFY POST LOCATIONS AND ELEVATIONS PRIOR TO FABRICATION.

DRY DOCK WALL - NORTH END

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

DESCRIPTION	DATE
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REVISION 2	
REVISION 3	
REVISION 4	

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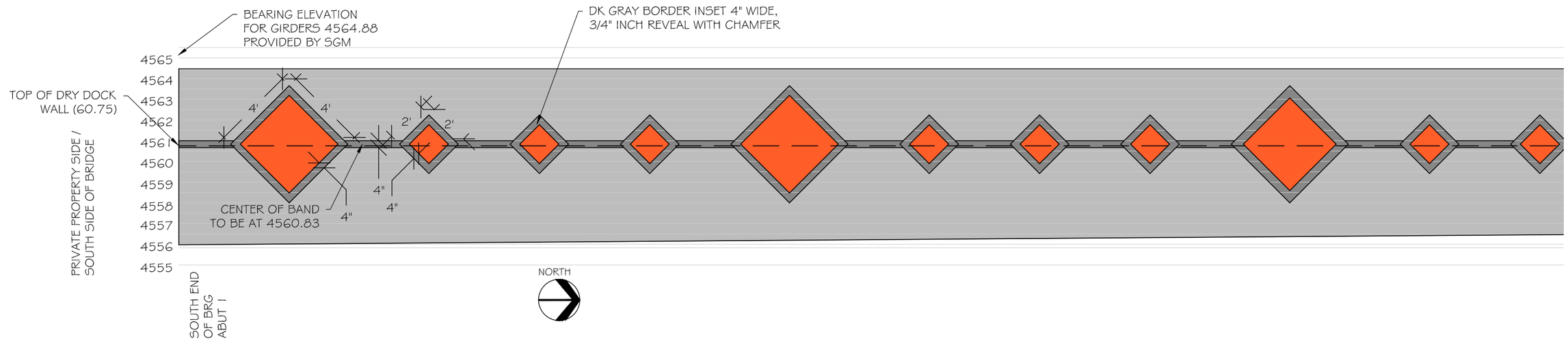
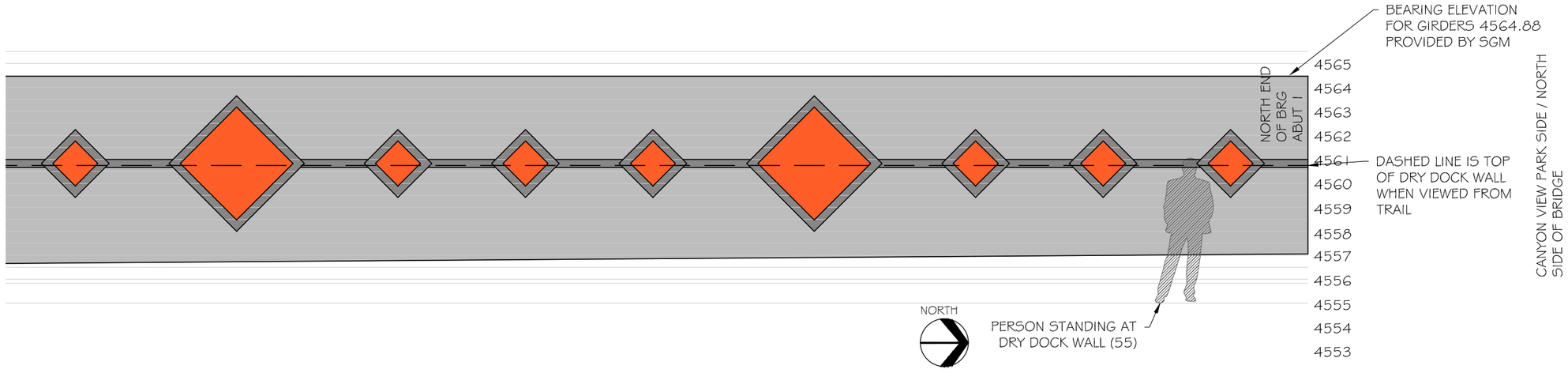
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903

G ROAD BRIDGE REPLACEMENT PROJECT
-PHASE 1 DRY DOCK PATTERNS
& RAILINGS-NORTH R-5



SOUTH END



NORTH END

WEST WALL / ABUTMENT 1

DESCRIPTION	DATE
REVISION △	–
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REVISION △	–
REVISION △	–

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903

G ROAD BRIDGE REPLACEMENT PROJECT
PHASE 1 ABUTMENT 1 PATTERNS R-6

125

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND
LANDSCAPE ARCHITECTURE

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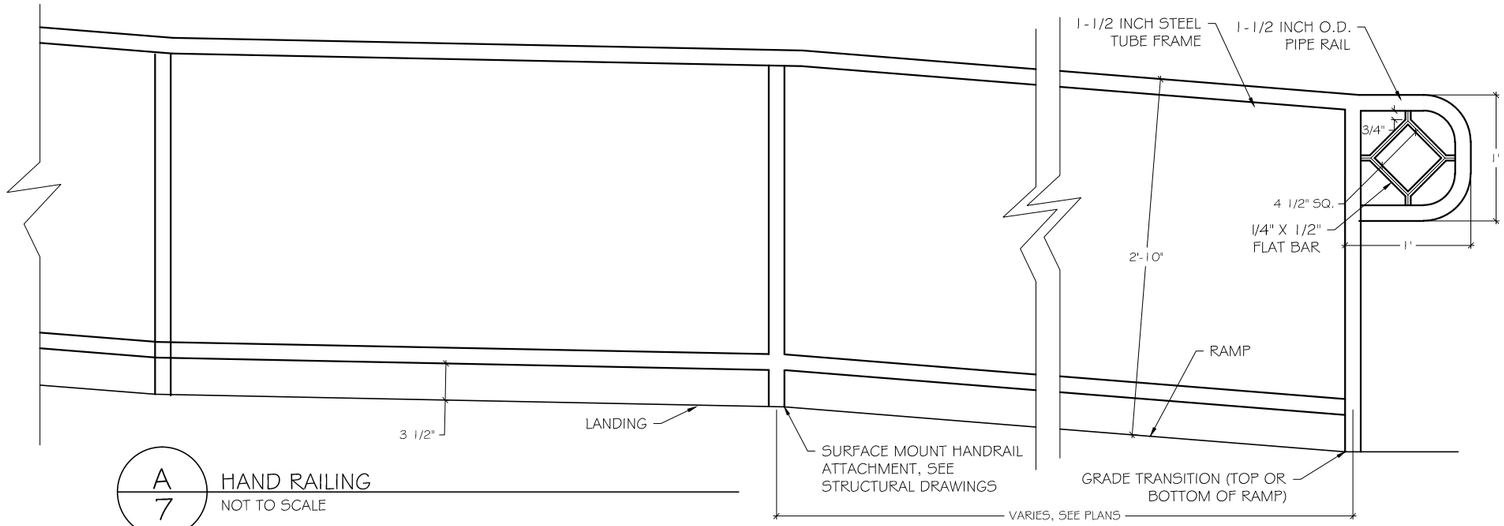
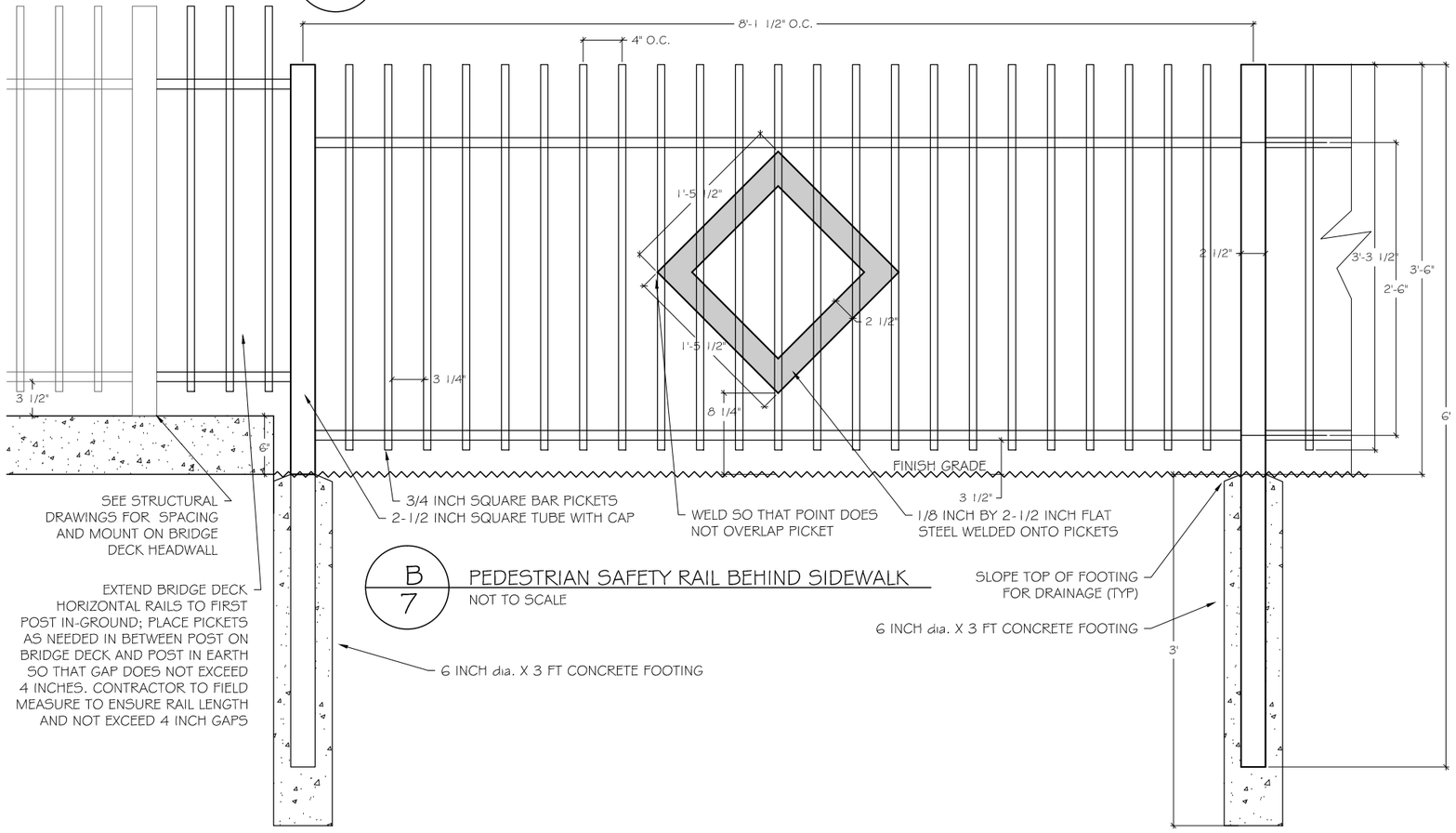
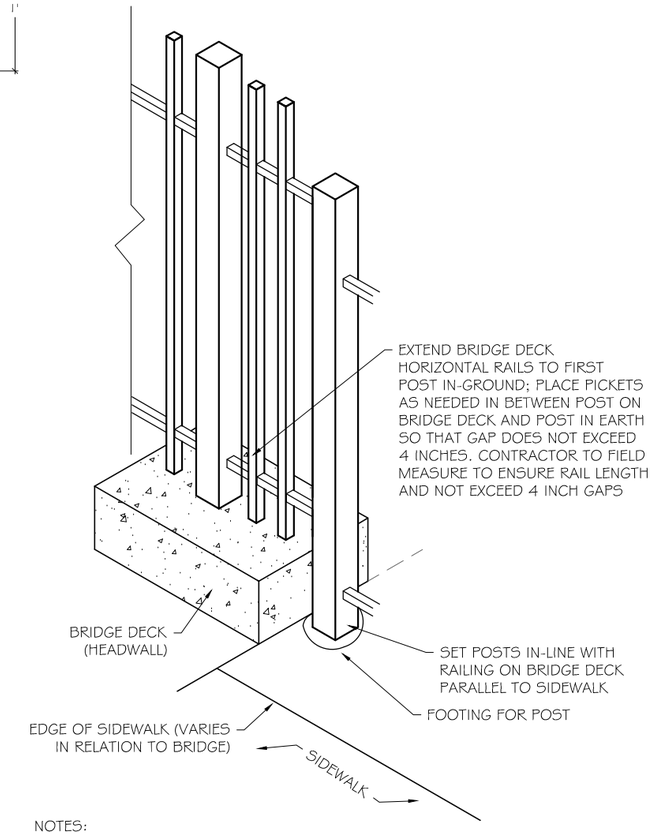


A/7 HAND RAILING
NOT TO SCALE



B/7 PEDESTRIAN SAFETY RAIL BEHIND SIDEWALK
NOT TO SCALE



NOTES:
1. GRIND ALL WELDS SMOOTH AND REMOVE ALL BURRS.
2. PAINT PER SPECIFICATIONS

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

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G ROAD BRIDGE REPLACEMENT PROJECT
-PHASE 1 RAILING DETAILS R-7

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WEST WALL / ABUTMENT 1

DRY DOCK WALL

EAST WALL / ABUTMENT 2

G ROAD

B R-7

A R-7

A R-8

HANDRAIL EXTENSION BEYOND DRY DOCK WALL ON CHANNEL SIDE

DRY DOCK WALL

SEE S.G.M. STRUCTURAL DRAWINGS FOR SAFETY RAILINGS ON BRIDGE

SEE S.G.M. AND CITY OF GRAND JUNCTION CIVIL DRAWINGS FOR LAYOUT DIMENSIONS, COORDINATES, GRADES

CUSTOM LENGTH PANEL

STOP RAILING AT DRIVEWAY

RAILING OCCURS BETWEEN SIDEWALK AND WING WALL

SEE S.G.M. STRUCTURAL DRAWINGS FOR SAFETY RAILINGS ON BRIDGE

BEGIN RAILING AT END OF WALL, NOT DRAIN PAN

A R-8 AND B R-7

END RAILING AT END OF STANDARD RAILING PANEL LENGTH WHERE DROP <30 INCHES, NOT END OF WALL

DRY DOCK WALL (SHOWN THIS SET AS CONTINUATION OF EAST WALL/ABUTMENT 2

0 30 60 90

NORTH

10 STANDARD RAILING PANELS

NO RAILING NECESSARY WHERE VERTICAL FALL FROM TOP OF WALL IS LESS THAN 30 INCHES EAST END

BEGIN AT WEST END OF WALL, NOT DRAIN PAN

A R-8 PEDESTRIAN SAFETY RAILING, AT SHELTER RETAINING WALL, AS VIEWED FROM SHELTER

NOT TO SCALE

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. 207-F1903

G ROAD BRIDGE REPLACEMENT PROJECT
-PHASE 1 RAILING PLAN R-8

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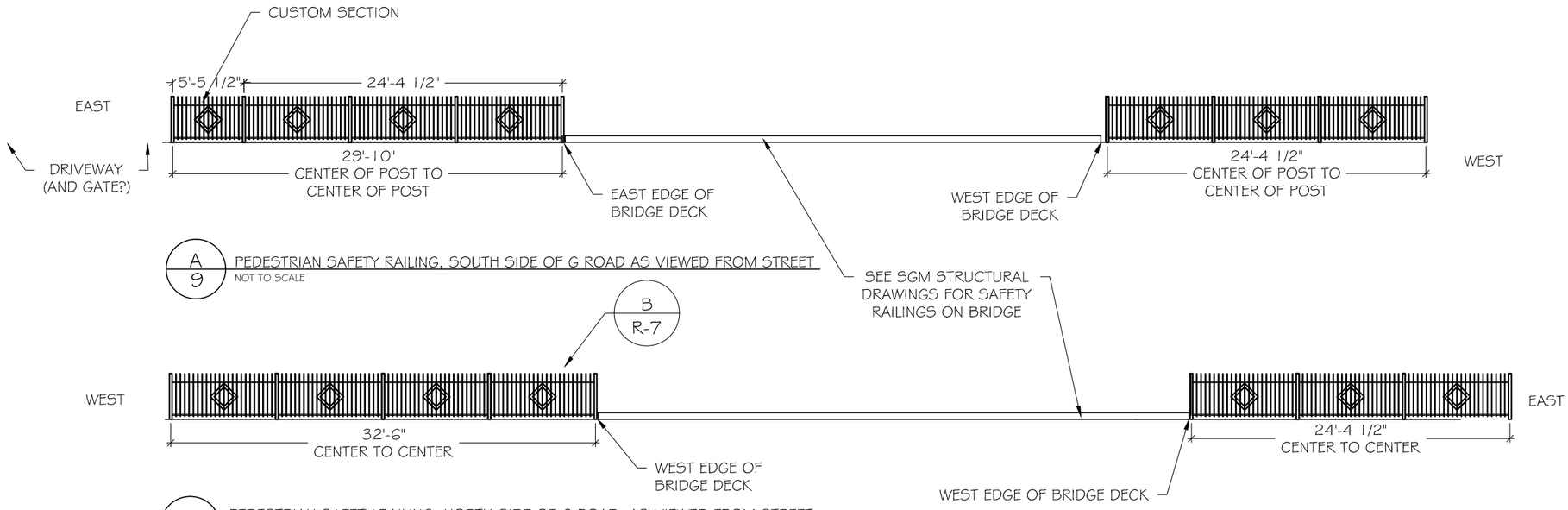

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PROJECT NO. 207-F1903

G ROAD BRIDGE REPLACEMENT PROJECT
–PHASE 1 FULL LENGTH SAFETY
RAILINGS AT BRIDGE ENDS R–9

PEDESTRIAN LIGHTING GENERAL NOTES:

1. THIS PROJECT WILL BE BID FOR THE INSTALLATION OF PEDESTRIAN LIGHTING, UNDERPASS LIGHTING, LIFT STATION POWER AND INSTALLATION OF POWER PEDESTAL PP1. BASE PROJECT: COMPLETE THE PEDESTRIAN LIGHTING AROUND THE G ROAD BRIDGE REPLACEMENT PROJECT.

2. THIS PROJECT CONSISTS OF WORK TO INSTALL ALL WIRING, CONDUIT, PULL BOXES, AND POWER PANELS. REFERENCE SCHEDULE OF LIGHTING DEVICES AND SUMMARY OF QUANTITIES.

3. TYPES "SA" LIGHT STANDARD & LUMINARIES (PEDESTRIAN LIGHT), PAY ITEM 613-30003, SHALL INCLUDE THE FOLLOWING ITEMS FROM ILLUMINATION SYSTEMS LIGHTING LOCATED AT 5 SOUTH KALAMATH STREET, DENVER, CO 80223, 303.295.2900, OR EQUAL. THE ITEMS NUMBERS ARE AS FOLLOWS: TYPE "SA" 1A-1527LED-R-12L-40-T2-MDL018-SV1-EZ-HSS-OAPT/450P414-.125/BK

4. TYPES "SB" LIGHT STANDARD & LUMINARIES (UNDER PASS PEDESTRIAN LIGHT CUSTOM), PAY ITEM 613-30004, SHALL INCLUDE THE FOLLOWING ITEMS FROM M&H LIGHTING LOCATED AT 1044 SPEER BLVD, DENVER COLORADO, 303-573-0222, OR EQUAL. THE CONSTRUCTION OF THE CUSTOM WALL MOUNTED LIGHT FIXTURE SHOWN IN DRAWINGS WILL BE FABRICATED BY LUMOS CUSTOM LIGHTING FABRICATION, 2385 S DELAWARE ST, DENVER, CO 80223, (303) 733-1200, OR EQUAL.
   4.1. THE BEULUX FLORENCE LED TAPE LIGHT NUMBERS ARE AS FOLLOWS: TYPE "SB" F-L200-IP66-CT40- 3 RUNS OF 120 FT FOR TOTAL OF 360 FT, 8-POWER SUPPLIES NTR-100-IP67. CUSTOM MANUFACTURER TO COORDINATE WITH BEULUX FOR POWER SUPPLY AND STRIP LIGHT REQUIREMENTS.
   4.2. CONSTRUCTION OF CUSTOM ENCLOSURES FOR THE TYPE "SB" STRIP LIGHT.

5. PROVIDE COLLISION BREAK AWAY CONNECTORS FOR TYPE "SA" FIXTURES. TYPE "SA" FIXTURES TO BE 12 FOOT ABOVE FINISHED GRADE TO BOTTOM OF LIGHT.

6. PROVIDE NEW MILBANK PANEL "PP1", 240V, 1ϕ, 3W 100A, 16 CIRCUITS SWITCHED AND 16 CIRCUITS NOT SWITCHED, MODEL #CP3B51C10A22CSXCSL16 LOCATED AS SHOWN IN DRAWINGS.

7. ALL PEDESTRIAN LIGHTING FIXTURES(TYPE "SA") INSTALLED ON THE PROJECT WILL BE CONTROLLED WITH A ELECTRICAL CONTRACTOR SUPPLIED PHOTOCELL TO BE LOCATED IN NEW MILBANK POWER PEDESTAL IN SWITCHED SECTION OF PANEL. ORIENT PANEL SO THAT PHOTOCELL WILL BE ORIENTED NORTH, TYPICAL.

8. PROVIDE 2" PVC SCHEDULE 80 CONDUIT BETWEEN EACH JUNCTION BOX LABELED "UB".

9. PROVIDE #10 THWN TRACER WIRE IN NEW CONDUIT TO FACILITATE LOCATION OF CONDUIT IN THE FUTURE.

10. COORDINATE LOCATION AND WIRING FOR SPRINKLER CONTROLLER WITH PROVIDER PRIOR TO TRENCHING. NEW SPRINKLER CONTROLLER WILL BE MOUNTED TO EXISTING HANDBALL COURT WALL. COORDINATE EXACT LOCATION WITH SPRINKLER DESIGNER PRIOR TO ROUGH-IN.

11. ELEVATIONS SHOWN IN THE SCHEDULE OF LIGHTING DEVICES ON THE PLANS SHEETS REPRESENT THE DESIGN FINISHED GRADE OR THE EXISTING GROUND FINISHED GRADE. THESE ELEVATIONS DO NOT INDICATE THE TOP ELEVATION OF THE LUMINARIES (PEDESTRIAN) FOUNDATION. PEDESTRIAN LIGHTING FOUNDATIONS SHALL BE CONSTRUCTED PER THE MANUFACTURERS RECOMMENDATIONS.

12. PULL BOXES FOR LIGHT STANDARD (PEDESTRIAN AND STREET) WILL BE TYPE I CDOT PULL BOXES 11"X18"X12".

13. PULL BOXES WILL BE INSTALLED IN GRADES WITHOUT CONCRETE WHERE POSSIBLE.

14. ALL ELECTRICAL CONDUIT SHALL BE SCHEDULE 80 PVC UNLESS NOTED OTHERWISE, TYPICAL.

15. UNLESS OTHERWISE NOTED, THE WORK DESCRIBED ON THE PLANS SHALL INCLUDE PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM. FURNISH ALL REQUIRED ITEMS WHETHER SUCH ARE SPECIFICALLY SHOWN OR NOT.

16. INFORMATION SHOWN ON DRAWINGS IS DIAGRAMMATIC ONLY AND SHALL NOT BE SCALED. OBTAIN VERIFY EXACT LOCATIONS, MEASUREMENTS, LEVELS, SPACE REQUIREMENTS, POTENTIAL CONFLICTS AMONG TRADES AND FOR ADJUSTING THE WORK REQUIRED BY THE ACTUAL CONDITIONS OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDER GROUND OBSTRUCTIONS AND MAKING ALLOWANCES FOR FIELD ADJUSTMENT OF LOCATION OF LUMINARIES TO AVOID SHUT DOWN OF ANY SERVICES OR SYSTEMS THAT ARE TO REMAIN.

17. BEFORE SUBMITTING THE BID ELECTRICAL CONTRACTOR SHALL VISIT AND EXAMINE THE PREMISES AND/OR JOB SITE SO AS TO ASCERTAIN THE EXISTING CONDITIONS IN WHICH THE CONTRACTOR WILL BE OBLIGED TO OPERATE IN PERFORMING HIS PART OF THE CONTRACT TO ANTICIPATE ANY POSSIBLE SPACE RESTRICTIONS OR CONSTRAINTS THAT COULD AFFECT THE TIMELY COMPLETION OF THE ELECTRICAL WORK IN ACCORDANCE WITH THE INTENT OF THE SPECIFICATIONS AND DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL REPORT TO THE THE PROJECT ENGINEER OR GENERAL CONTRACTOR ANY CONDITIONS THAT MIGHT PREVENT THE SPECIFIED ELECTRICAL WORK FROM BEING PERFORMED IN THE MANNER INTENDED. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED TO THE ELECTRICAL CONTRACTOR FOR FAILURE TO VISIT THE PROJECT SITE, OR FOR ANY ALLEGED MISUNDERSTANDING OF THE MATERIALS TO BE FURNISHED OR WORK TO BE DONE..

18. THE ELECTRICAL CONTRACTOR SHALL EXAMINE THE DRAWINGS OF ALL TRADES WHOSE WORK RELATES TO OR IS DEPENDENT ON ELECTRICAL WORK TO BECOME FULLY INFORMED OF THE EXTENT AND CHARACTER OF THEIR SPECIFIED WORK AND BE ABLE TO COORDINATE WITH OTHER TRADES WHILE AVOIDING POSSIBLE INTERFERENCE WITH THE ELECTRICAL WORK.

19. THE CONTRACTOR SHALL USE CONDUIT PLUGS AND SEALING PLUGS FOR SEALING ALL EMPTY CONDUITS AND CONDUITS OCCUPIED WITH CABLING, RESPECTIVELY, INSTALLED UNDER THIS CONTRACT. CONDUIT PLUGS SHALL BE MANUFACTURED FROM HIGH-IMPACT PLASTIC COMPONENTS, COMBINED WITH DURABLE ELASTIC GASKETS. THEY SHALL BE CORROSION PROOF AND APPROPRIATE FOR USE AS EITHER A LONG-TERM OR TEMPORARY SEAL. CONDUIT PLUGS SHALL BE REMOVABLE AND REUSABLE. THEY SHALL BE BOTH WATERTIGHT AND AIRTIGHT TO PREVENT THE FLOW OF WATER AND BUILDUP OF SEDIMENTATION WITHIN THE CONDUIT. EACH CONDUIT PLUG SHALL BE EQUIPPED WITH A ROPE TIE DEVICE TO ALLOW THE SECURING OF PULL ROPE TO THE PLUG'S BACK COMPRESSION PLATE. THE CONTRACTOR SHALL ATTACH THE PULL ROPE TO THE BACK COMPRESSION PLATE OF THE PLUG AND STORE EXCESS SLACK PULL ROPE BEHIND THE PLUG WITHIN THE CONDUIT FOR FUTURE USE.

PP1-X	ELECTRICAL CIRCUIT NUMBER (REFER TO PANEL SCHEDULES)
UB □	NEW HEAVY DUTY, TRAFFIC RATED, FLUSH-TO-GRADE POLYMER CONCRETE SPLICE BOX WITH HEAVY DUTY, TRAFFIC RATED, BOLTED COVER. 11"X18"X12" TYPE 1. NUMBER ASSOCIATED IS NOT THE QUANTITY BUT THE IDENTIFIER ONLY.
⌒	UNDER GROUND BURIED RACEWAY (2#4 THWN CU AND 1#8 GND) IN 2" PVC CONDUIT (UNLESS NOTED OTHERWISE ON PLANS) IN 24" DEEP TRENCH, BURY AND COMPACTED BACKFILL TO CITY STANDARDS.
●-◆-	INSTALL SINGLE ARM PEDESTRIAN STANDARD OR STREET STANDARD AS SPECIFIED. NUMBER ASSOCIATED IS NOT THE QUANTITY BUT THE IDENTIFIER ONLY.

COLORADO REGISTERED PROFESSIONAL ENGINEER 37580 3-1-21

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

ACM CONSULTING
ELECTRICAL DESIGN, CONSULTING ENGINEERS; PH: 970-245-7292
PO 3211 GRAND JCT., CO 81502
EMAIL: joelm@ACMengrs.com

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APPROVED BY LC	DATE 3-1-2021

CITY OF Grand Junction COLORADO

PUBLIC WORKS ENGINEERING DIVISION

G ROAD BRIDGE REPLACEMENT
COVER SHEET PLAN

Schedule of Lighting Devices

ITEM No.					613-30003	613-40012	613-30004	
DESCRIPTION					LIGHT STANDARD LUMINAIRE LED (PEDESTRIAN TYPE "SA")	LIGHT STANDARD FOUNDATION SPECIAL	LIGHT STANDARD LUMINAIRE LED (TUNNEL TYPE "SB")	NOTES
					EACH	EACH		
SHEET NO.	TYPE	EAST	NORTH	Elevation				
E3	SA-1	79191.63	50039.22	4566.91	1	1		1,2
E3	SA-2	79109.86	50044.11	4567.78	1	1		1,2
E3	SA-3	79032.96	50069.44	4569.02	1	1		1,2
E3	SA-4	79044.43	50082.00	4563.02	1	1		1,2
E3	SA-5	79095.83	50076.35	4561.17	1	1		1,2
E3	SA-6	79152.35	50088.92	4563.86	1	1		1,2
E3	SA-7	79147.54	50132.12	4566.77	1	1		1,2
E3	SA-8	79123.69	50167.51	4568.42	1	1		1,2
E3	SA-9	78928.95	50134.64	4568.35	1	1		1,2
E3	SA-100	79094.56	49945.44	4567.90	1	1		1,2
E3	SA-101	79030.65	49916.16	4561.17	1	1		1,2
E3	SA-102	78978.08	49942.19	4568.14	1	1		1,2
E3	SA-103	78909.86	49895.56	4566.22	1	1		1,2
E3	SA-104	79015.72	49854.83	4561.17	1	1		1,2
E3							1	3
TABLE TOTALS					14	14	1	

SCHEDULE OF LIGHTING DEVICES NOTES:

1. ELEVATION SHOWN IS TO TOP OF FOUNDATION , LIGHT WILL BE 12' ABOVE FOUNDATION TOP.
2. FOUNDATION TOP HEIGHT AS SHOWN IN DETAIL.
3. LIGHT STANDARD WILL BE CUSTOM FABICATED AND WILL INCLUDE ALL PARTS FOR FOR MANUFACUTRE INCLUDING STRIP LIGHTS, METAL, JBOXES, POWER SUPPLIES AND WIRING.

Tabulation of Approximate Quantities

Item No.	Ref. No.	Construction Note Description	Quantity	Unit	NOTES
		2 Inch Electrical Conduit (Plastic)	1318	LF	
		1 Inch Electrical Conduit (Plastic)	354	LF	
		3/4 Inch Electrical Conduit (GRC)	10	LF	
		Type One Pull Box	22	EA	
		Wiring	1	LS	
		Light Standard and Luminaire (Pedestrian "SA")	14	EA	
		Light Standard Foundation (Special)	14	EA	
		Light Standard and Luminaire (TUNNEL "SB")	1	EA	
		Lighting Control Center (Special)	1	EA	
SUMMARY NOTES:					

PEDESTRIAN LIGHTING GENERAL NOTES:

1. EACH LIGHT TO HAVE A PULL BOX "UB", REFERENCE ELECTRICAL DRAWING SHEETS.

COLORADO REGISTERED PROFESSIONAL ENGINEER
37580
3-1-21

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CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

G ROAD BRIDGE REPLACEMENT
LIGHTING SCHEDULES

FLAG NOTES:

1. COORDINATE POWER CONNECTION AND EXACT LOCATION OF NEW LIFT STATION CONTROLS WITH PROVIDER PRIOR TO ROUGH-IN. PROVIDE 2 - SETS OF 2" PVC SCHEDULE 80 WITH #10 AWG THWN CU + 1#12GND CU FOR SUMP PUMPS.
2. FIELD VERIFY EXACT LOCATION OF DISCONNECTS FOR 2-240 V 1PHASE PUMPS "S1" AND "S2". PROVIDE 2 - #10 THWN CU + #12 GND CU FOR EACH MOTOR. FIELD VERIFY EXACT LOCATION WITH MOTOR PROVIDER PRIOR TO TRENCHING.
3. FROM PP1 PROVIDE 1 - 2" SCHEDULE 80 PVC FOR NEW AND FUTURE ELECTRICAL CONNECTIONS. TERMINATE INTO J-BOX ON SOUTH SIDE OF UNDER PASS AND PROVIDE PULL STRING IN EACH CONDUIT.
4. PROVIDE J-BOX FOR NEW FEED TO FUTURE ROUNDABOUT. PROVIDE PULL STRING FROM PANEL PP1 AND TERMINATE IN J-BOX.
5. ORIENT PANEL PP1 SO THAT PHOTOCELL HAS A NORTH FACING EXPOSURE.
6. CONDUIT ROUTED THROUGH BRIDGE GIRDERS IN SUPPLIED 4" CONDUIT BY BRIDGE SUPPLIER. REFERENCE STRUCTURAL DRAWINGS FOR DETAILS OF CONDUIT.

24 ROAD

G ROAD

24 ROAD

SA-8 PP1-18,20 UB

SA-7 PP1-18,20 UB

SA-9 PP1-18,20 UB

SA-4 PP1-18,20 UB

SA-5 PP1-18,20 UB

SA-6 PP1-18,20 UB

SA-3 PP1-18,20 UB

LIFT STATION CONTROLS

PP1

SA-2 PP1-18,20 UB

SA-1 PP1-18,20 UB

SA-102 UB PP1-17,19

SA-100 PP1-17,19 UB

SA-101 PP1-17,19 UB

SA-103 PP1-17,19 UB

SA-104 PP1-17,19 UB

56+50 56+00 55+50 55+00 54+50 54+00 53+50 53+00

36+00 36+50 37+00 37+50 38+00 38+50 39+00 39+50 40+00 40+50 41+00

LIGHTING/ELECTRICAL PLAN KEY MAP PHASE 1

SCALE: 1"=40'

NORTH

20 0 10 20 40

GRAPHIC SCALE

COLORADO REGISTERED JOEL A. MARTINEZ 37580 3-1-21 PROFESSIONAL ENGINEER

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EMAIL: joelm@ACMengrs.com

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DRAWN BY	AJM	DATE 3-1-2021
DESIGNED BY	AJM	DATE 3-1-2021
CHECKED BY	AJM	DATE 3-1-2021
APPROVED BY	JC	DATE 3-1-2021

CITY OF Grand Junction COLORADO

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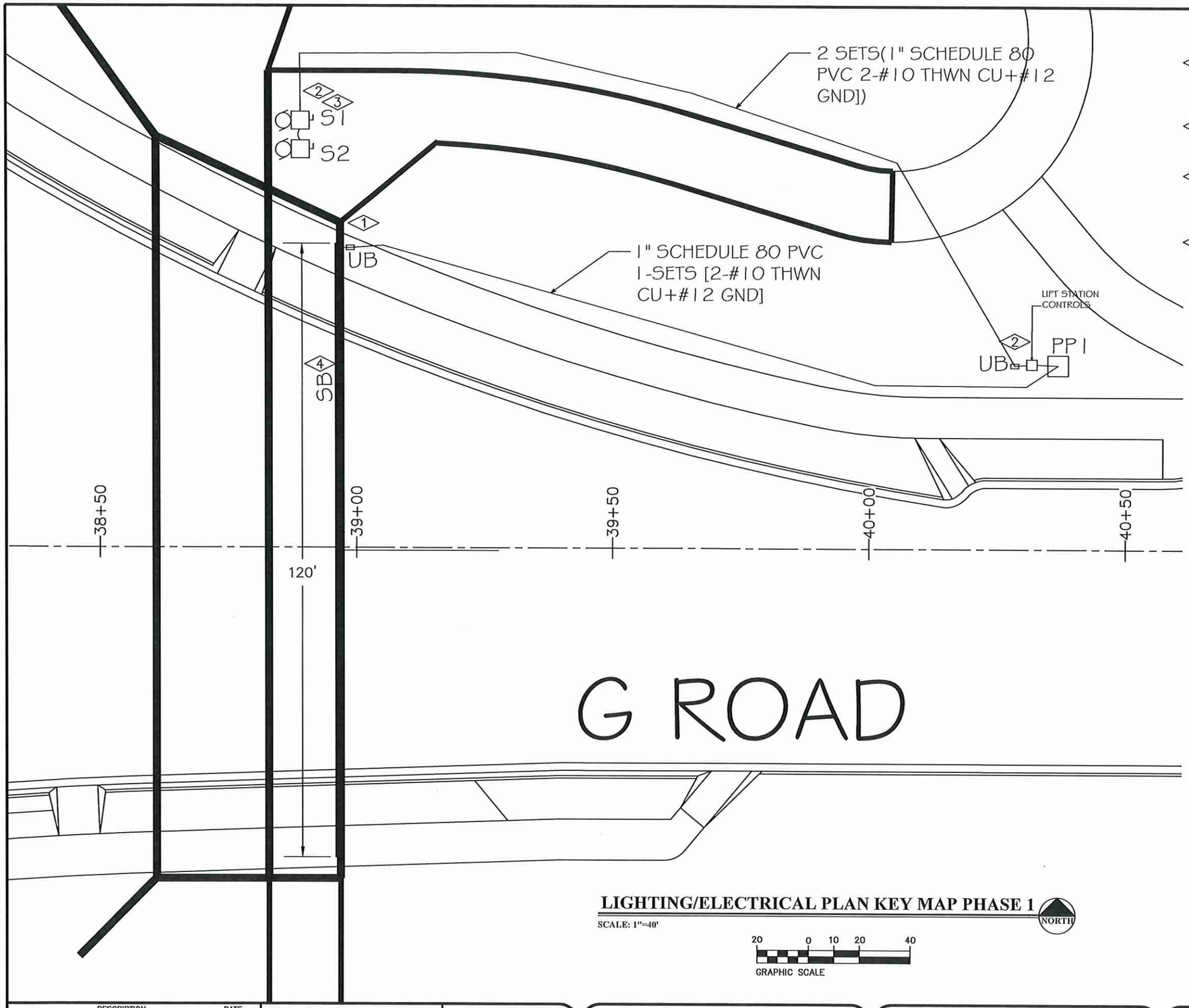
G ROAD BRIDGE REPLACEMENT
SITE LIGHTING PLAN



FLAG NOTES:

1. PROVIDE 1" SCHEDULE 80 PVC TO UTILITY BOX. PROVIDE 1" SLEEVE THROUGH WALL TO FEED TYPE "SB" LIGHT. ALL SLEEVES TO BE SEALED TO PREVENT WATER FROM ENTERING. COORDINATE TYPE OF SEALANT TO USE WITH BRIDGE PROVIDER PRIOR TO SEALING.
2. COORDINATE POWER CONNECTION AND EXACT LOCATION OF NEW LIFT STATION CONTROLS WITH PROVIDER PRIOR TO ROUGH-IN. PROVIDE 2 - SETS OF [2#10 AWG THWN CU + 1#12GND CU] FOR SUMP PUMPS.
3. FIELD VERIFY EXACT LOCATION OF DISCONNECTS FOR 2-240 V, 1PHASE, 1 HP PUMPS, "S1" AND "S2". PROVIDE 2 - #10 THWN CU + #12 GND CU FOR EACH MOTOR. FIELD VERIFY EXACT LOCATION WITH MOTOR PROVIDER PRIOR TO TRENCHING.
4. TOTAL LENGTH OF TYPE "SB" LIGHT IS 120', CENTERED LENGTHWISE ON EAST MOUNTING WALL WITH BOTTOM OF FIXTURE AT ELEVATION OF 4563.35' FOR THE ENTIRE LENGTH OF THE FIXTURE.

LIGHTING/ELECTRICAL PLAN KEY MAP PHASE 1

SCALE: 1"=40'

NORTH

20 0 10 20 40

GRAPHIC SCALE

COLORADO REGISTERED JOEL M. GAGNON 37580 3-1-21 PROFESSIONAL ENGINEER

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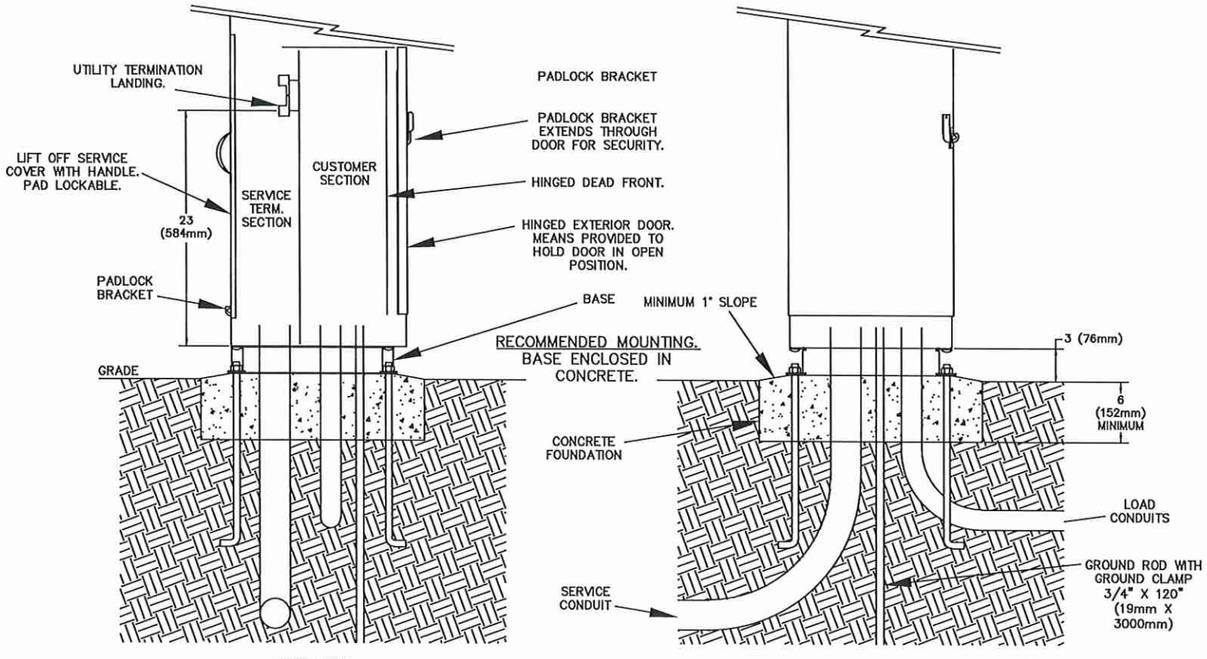
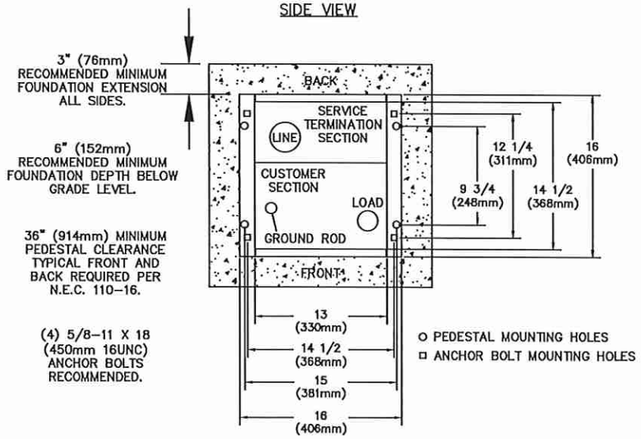
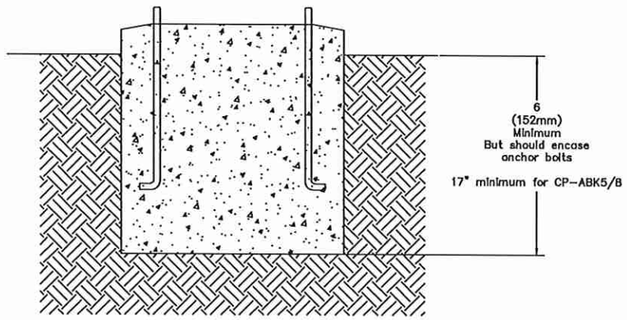
G ROAD BRIDGE REPLACEMENT
SITE LIGHTING PLAN





MOUNTING BASE DETAIL
(TOP VIEW)



OPTIONAL MOUNTING
NO BASE, MOUNT DIRECTLY ON FOUNDATION.

NOTES

1. DRAWNG DEPICTS TYPICAL INSTALLATION, COORDINATE EXACT INSTALLATION FOR SPECIFIC MODEL WITH PROVIDER PRIOR TO PURCHASING. CONTROL CABINET SHALL BE U/L LISTED "INDUSTRIAL CONTROL PANEL" PER UL 508.

2. CONSTRUCTION SHALL BE NEMA 3R. 12 GA. A60 STEEL POWDER COATED MINT GREEN WITH PHOTO ELECTRIC CELL IN SERVICE CABINET. ELECTRICAL CONTRACTOR TO PROVIDE PHOTOCELL.

3. VOLTAGE RATINGS OF SERVICE EQUIPMENT SHALL CONFORM TO THE SERVICE VOLTAGES INDICATED ON THE PLANS.

4. SERVICE EQUIPMENT ENCLOSURE AND METERING EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE SERVING UTILITY. WHEN THE SERVING UTILITY PROVIDES BOTH METERED AND UN-METERED CIRCUITS, A SEPARATE BUS SHALL BE PROVIDED FOR EACH CIRCUIT. THE METER AREA SHALL HAVE A SEALING, LOCKABLE, RAIN TIGHT COVER THAT CAN BE REMOVED WITHOUT THE USE OF TOOLS.

5. SERVICE EQUIPMENT SHALL BE FACTORY WIRED AND CONFORM TO NEMA STANDARDS.

6. THE EXTERIOR DOOR SHALL HAVE PROVISIONS FOR PADLOCKING. THE PADLOCK HOLE SHALL BE A MINIMUM DIAMETER OF 11mm.

7. ALL TERMINALS FOR INCOMING SERVICE CONDUCTORS SHALL BE COMPATIBLE WITH EITHER COPPER OR ALUMINUM CONDUCTORS SIZED TO SUIT THE CONDUCTORS SHOWN ON THE PLAN. TERMINAL LUGS SHALL BE COPPER OR TIN-PLATED ALUMINUM. SOLID NEUTRAL TERMINAL STRIP SHALL BE RATED 125A UNLESS OTHERWISE SPECIFIED AND FOR USE WITH COPPER OR ALUMINUM CONDUCTORS. THE TERMINAL SHOULD INCLUDE BUT NOT BE LIMITED TO:
   A) INCOMING TERMINALS (LANDING LUGS)
   B) NEUTRAL LUGS
   C) SOLID NEUTRAL TERMINAL STRIP.
   D) TERMINAL STRIPS FOR CONDUCTORS WITHIN THE ENCLOSURE.

8. AT LEAST 4 STANDARD SINGLE POLE 208V AND 1 SINGLE POLE 120 CIRCUIT BREAKER SPACES (20mm NOMINAL) SHALL BE PROVIDED FOR BRANCH CIRCUITS. CIRCUIT BREAKER INTERIORS SHALL BE COPPER. INTERIORS SHALL ACCEPT PLUG-IN OR CABLE-IN/ CABLE-OUT CIRCUIT BREAKERS.

9. PLUG-IN CIRCUIT BREAKERS MAY BE MOUNTED IN THE VERTICAL OR HORIZONTAL POSITION. CABLE-IN/ CABLE-OUT CIRCUIT BREAKERS SHALL BE MOUNTED IN THE VERTICAL POSITION.

10. FASTENERS ON THE EXTERIOR OF THE ENCLOSURE SHALL BE VANDAL RESISTANT AND SHALL NOT BE REMOVABLE FROM THE EXTERIOR. ALL NUTS, BOLTS, SCREWS, WASHERS, AND HINGES SHALL BE STAINLESS STEEL.

11. PHENOLIC NAME PLATES SHALL BE PROVIDED AS REQUIRED.

12. A PLASTIC COVERED WIRING DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.

13. FOUNDATION SHALL EXTEND 50mm MINIMUM BEYOND EDGE OF ENCLOSURE.

B/1 **TYPICAL POWER PEDESTAL/LIGHTING CONTROL CENTER (SPECIAL) PLAN**
NOT TO SCALE

COLORADO REGISTERED PROFESSIONAL ENGINEER
JOEL A. MARSH
37580
3-1-21

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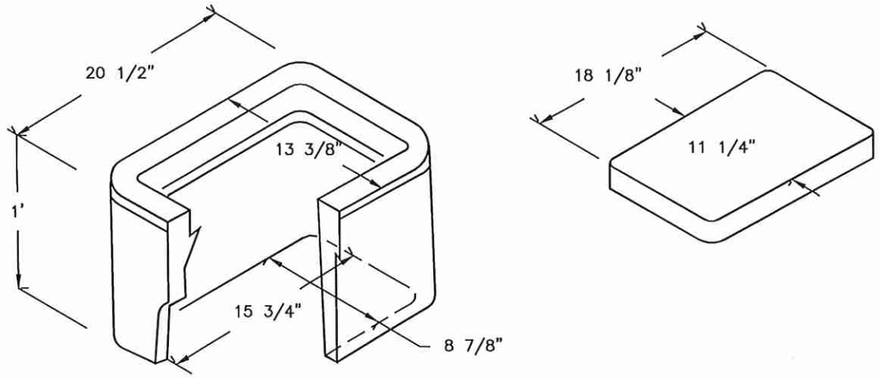
G ROAD BRIDGE REPLACEMENT
PEDESTAL DETAILS

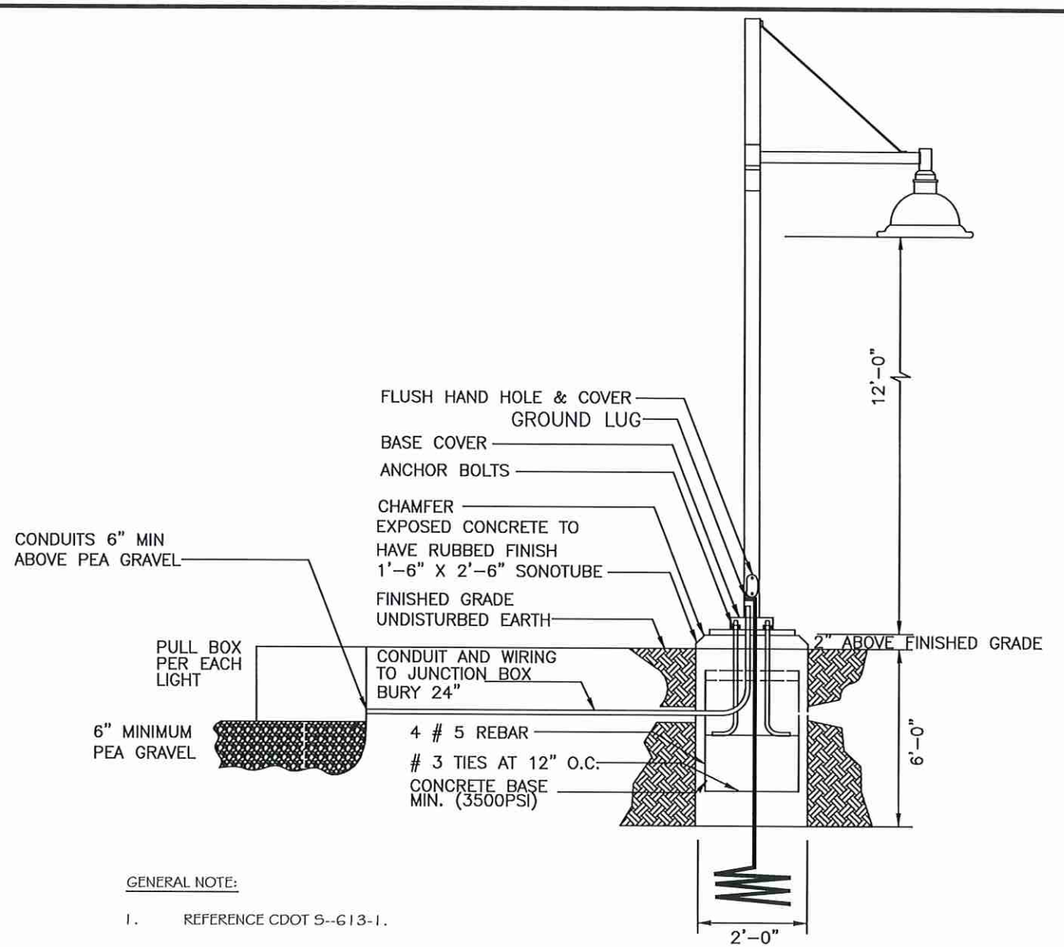


STREET LIGHT AND PEDESTRIAN LIGHT PULL BOX

DIMENSIONS SHOWN HERE FOR LAYOUT AND PLANNING PURPOSES. CONTRACTOR SHALL RELY ON MANUFACTURER DETAILS

1. PULL BOXES, PULL BOX COVERS AND EXTENSIONS SHALL BE MADE OF FIBERGLASS REINFORCED POLYMER CONCRETE. PULL BOXES SHALL BE VERIFIED BY A 3RD PARTY NATIONALLY RECOGNIZED INDEPENDENT TESTING LABORATORY AS MEETING ALL TEST PROVISIONS OF THE LATEST ANSI/SCTE 77 SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY, TIER 22 RATING. CERTIFICATION DOCUMENTS SHALL BE SUBMITTED WITH MATERIALS SUBMITTALS. THE PULL BOX SHALL HAVE A DETACHABLE COVER WITH A SKID RESISTANT SURFACE AND HAVE THE WORDS ELECTRICAL CAST INTO THE SURFACE. PAINTING THE WORDS SHALL NOT BE ACCEPTED. MARKINGS SHOWING THE TIER 22 RATING MUST BE LABELED OR STENCILED ON THE INSIDE AND OUTSIDE OF THE BOX AND ON THE UNDER SIDE OF THE COVER. THE COVER SHALL BE ATTACHED TO THE PULL BOX BODY BY MEANS OF A MINIMUM 3/8 - 7 UNIFIED NATIONAL COURSE (UNC) STAINLESS STEEL PENTA HEAD BOLTS AND SHALL HAVE TWO LIFT SLOTS TO AID IN THE REMOVAL OF THE LID.
2. PULL SLOTS SHALL BE RATED FOR A MINIMUM PULL OUT OF 3,000 POUNDS. MAGNESIUM CHLORIDE TESTS SHOULD BE PERFORMED IN ACCORDANCE WITH THE LATEST ANSI/SCTE 77 SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY, TIER 22 RATING.
3. PROVIDE AT LEAST 6 INCHES OF PEA GRAVEL MEASURED FROM BOTTOM OF PULL BOX FOR DRAINAGE. PEA GRAVEL IS INCLUDED IN PULL BOX PAY ITEM.

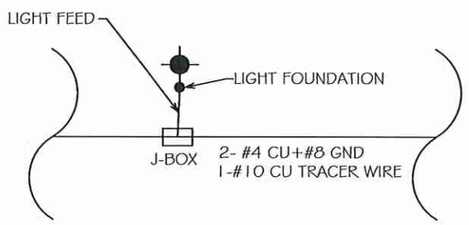
C 1 UTILITY BOX DETAIL
NOT TO SCALE



GENERAL NOTE:

1. REFERENCE CDOT S--613-1.

C 3 TYPICAL TYPE SA LIGHT DETAIL
NOT TO SCALE



C 2 UTILITY BOX CONNECTION DETAIL
NOT TO SCALE

NOTES:

1. ALL WIRING TO LIGHTS WILL BE WIRED IN PARALLEL NOT IN SERIES WITH #4 WIRE FEED TO REDUCE VOLTAGE DROP.
2. PROVIDE #10 TRACER WIRE IN ALL NEW CONDUIT.

LUMINAIRE SCHEDULE

TYPE	MANUFACTURER / MODEL NUMBER	APPROVAL	VOLTAGE / MOUNTING / # OF LAMPS	BALLAST / LAMPE TYPE / LAMP CAT. #	DESCRIPTION
SA	STERNBERG LIGHTING 1A-1527FLED-SM-SV1-4ARC-35(00)K-T2-F-MDL03-BK	OWNER REQUESTED	240 POLE 1	ELECTRONIC LED 66 W	PEDESTRIAN LUMINAIRE, ARM MOUNTED, LED, CUTOFF, ORDER POLE SO THAT LAMP HEIGHT IS 12' AFG MEASURED AT BOTTOM OF LUMINAIRE. ORDER WITH BRD ARM COLOR OF POLE AND ARM TO MATCH POLE.
SB	BEULUX FLORENCE F-L200-IP66-CT40- 3 RUNS OF 120 FT FOR TOTAL OF 360 FT	OWNER REQUESTED	240 SURFACE WALL 1	ELECTRONIC LED 604.8 W	CUSTOM TAPE LIGHT FIXTURE TO BE MOUNTED ON EAST WALL OF UNDER PASS. COORDINATE POWER FEED LOCATION ON NORTH END TO ACCEPT 3/4" RMC. CUSTOMER TO REVIEW AND ACCEPT FINAL FABRICATION DRAWINGS.

COLORADO REGISTERED JOEL M. CLARK 37580 3-1-21 PROFESSIONAL ENGINEER

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CITY OF Grand Junction COLORADO

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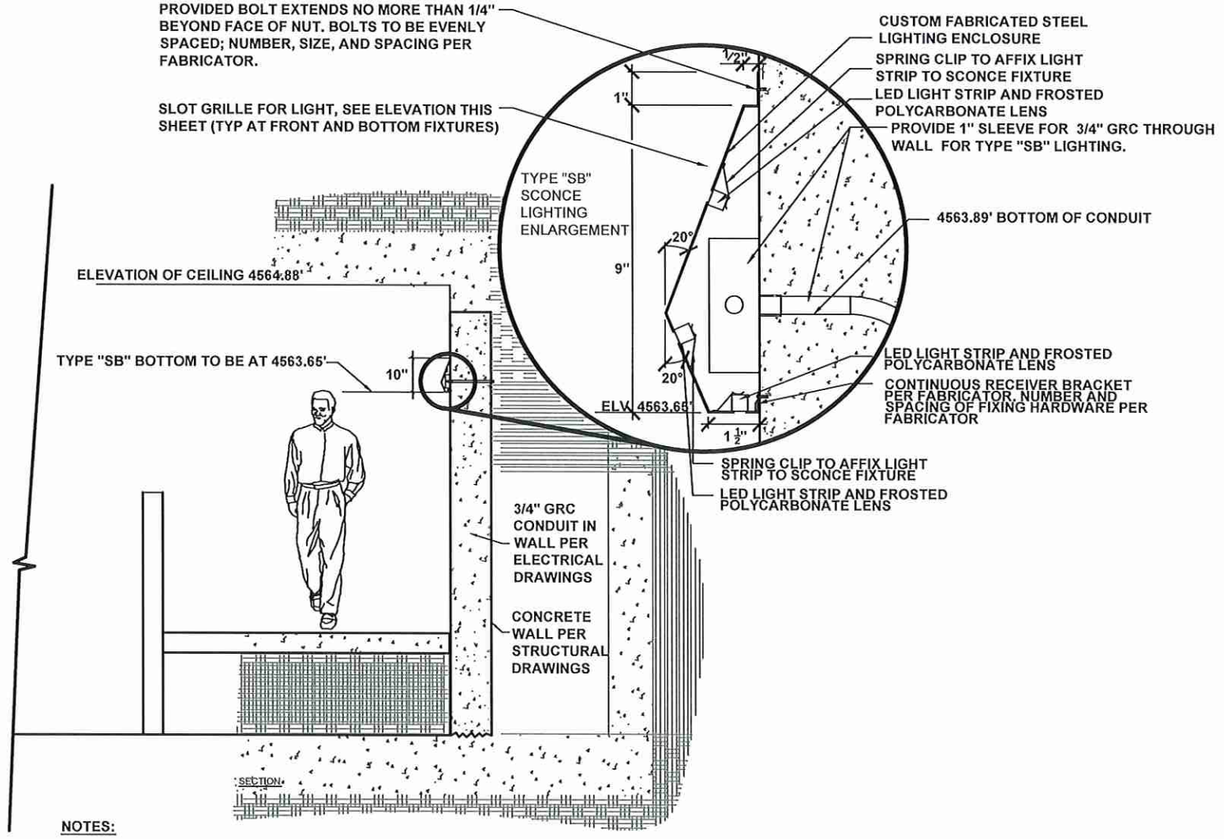
G ROAD BRIDGE REPLACEMENT
LIGHTING DETAILS

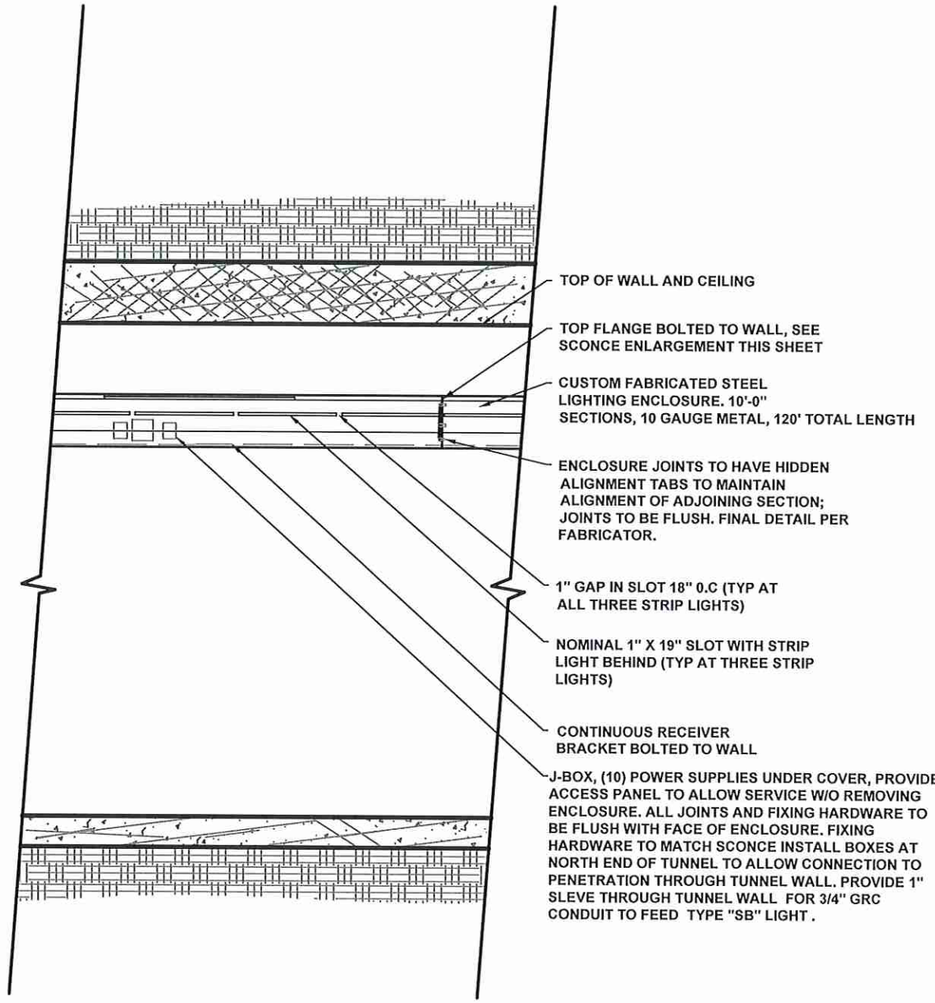
GENERAL NOTE:
1. ALL PRE-FABRICATED LIGHTING FIXTURES, PROVIDE SHOP DRAWINGS FOR REVIEW BY CITY PRIOR TO FABRICATION.



NOTES:

1. DETAIL HAS BEEN PROVIDED TO ILLUSTRATE DESIGN INTENT, SEE LIGHTING PLANS FOR LAYOUT INFORMATION AND ELECTRICAL REQUIREMENTS.
2. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ASSEMBLY AND FIXING OF LINEAR SCONCE IN COORDINATION WITH ELECTRICAL ENGINEER'S SELECTED FIXTURES / LUMINARIES. SHOP DRAWING TO BE REVIEWED AND APPROVED PRIOR TO FABRICATION.
3. ALL VISIBLE STEEL AND HARDWARE TO BE POWDER COATED FINISH, PER OWNER SPECIFICATIONS.
4. FABRICATOR TO INCLUDE IN SHOP DRAWINGS SOLID END CAPS. END CAPS TO BE FLUSH TO PROFILE OF SCONCE FIXTURE.

D/1 SCONCE LIGHT FITURE DETAIL (TUNNEL)
NOT TO SCALE



SECTION ELEVATION

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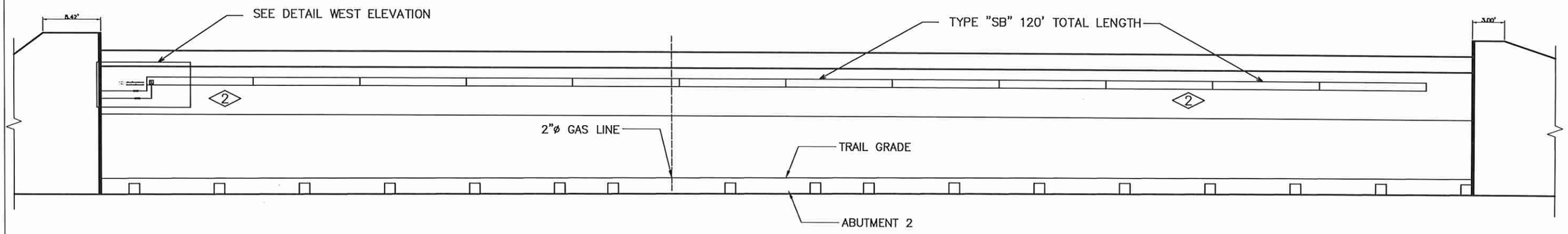


LIGHTING/ELECTRICAL PLAN UNDER PASS

SCALE: 1"=20'

NORTH

10 0 5 10 20

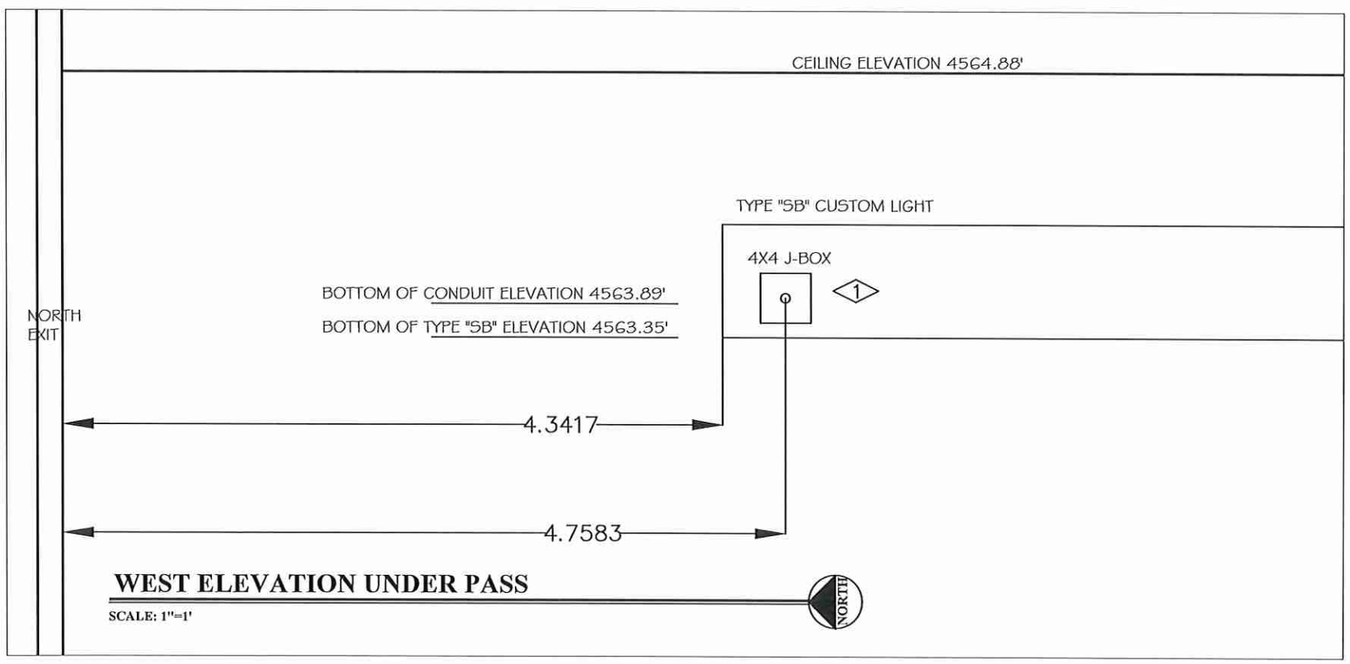
GRAPHIC SCALE

ABUTMENT 2 ELEVATION

(TAKEN AT ℄ OF ABUTMENT)

FLAG NOTES:

1. BRIDGE PROVIDER TO INSTALL 1" SLEEVE FOR FEED THROUGH TO 4X4 J-BOX FOR TYPE "SB" LIGHT. COORDINATE INSTALLATION AND SEALING OF CONDUIT THROUGH WALL WITH PROVIDER.
2. CENTER 120' OF TYPE "SB" LIGHT ON WALL. BOTTOM ELEVATION OF LIGHT TO BE AT 4563.35' FOR ENTIRE LENGTH. FIELD ADJUST SO THAT WALL PENETRATION AND J-BOX ARE ALIGNED.



WEST ELEVATION UNDER PASS

SCALE: 1"=1'

NORTH

COLORADO REGISTERED PROFESSIONAL ENGINEER
JOEL M. CLARK
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3-1-21

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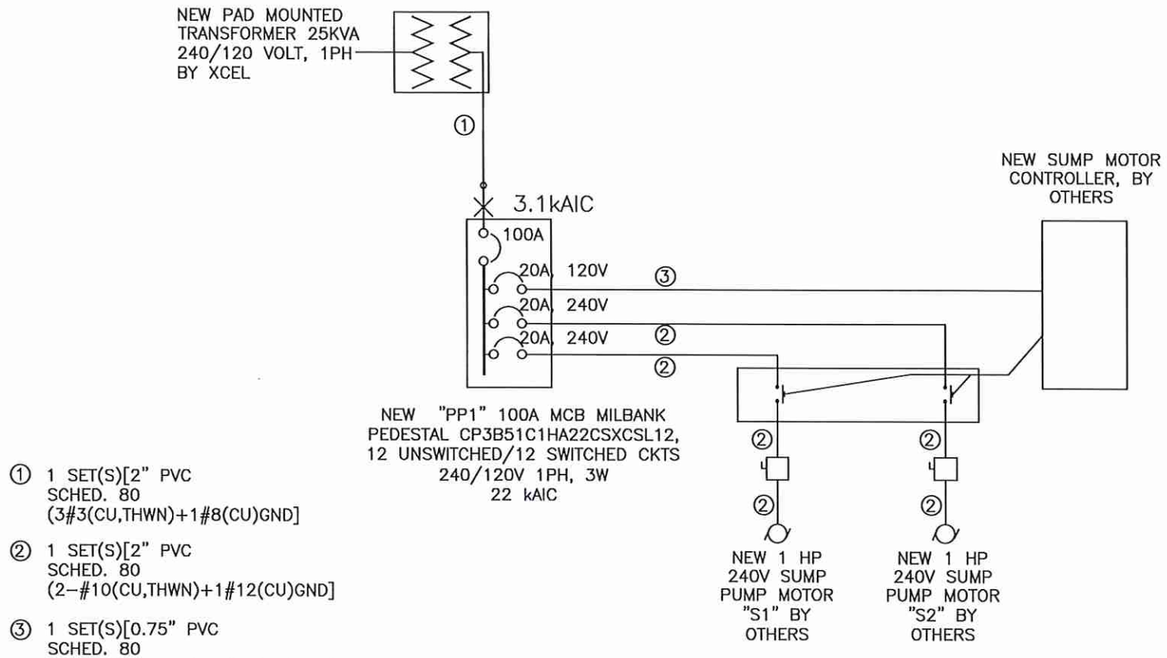

① 1 SET(S)[2" PVC
SCHED. 80
(3#3(CU,THWN)+1#8(CU)GND]

② 1 SET(S)[2" PVC
SCHED. 80
(2–#10(CU,THWN)+1#12(CU)GND]

③ 1 SET(S)[0.75" PVC
SCHED. 80
(2–#12(CU,THWN)+1#12(CU)GND]

A/1 ONE–LINE DIAGRAM

NOT TO SCALE

GENERAL NOTES:

1. IN AS MUCH AS DESIGN REQUIRES THAT CERTAIN ASSUMPTIONS BE MADE REGARDING EXISTING CONDITIONS, AND BECAUSE SOME OF THESE ASSUMPTIONS CANNOT BE VERIFIED. FIELD COORDINATION DURING CONSTRUCTION SERVICES IS IMPERATIVE. CONTRACTORS BIDDING THIS WORK MUST MAKE REASONABLE ALLOWANCES FOR UNFORESEEN CONTINGENCIES.
2. THE SERVING ELECTRICAL ASSOCIATION SHALL ADVISE THE OWNER/ENGINEER PRIOR TO SERVICE MODIFICATION REQUIRING COST TO THE OWNER.
3. REFERENCE CIVIL, LANDSCAPE AND IRRIGATION DRAWING PLANS FOR COORDINATION AND LOCATION OF ALL UNDER GROUND SYSTEMS.
4. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES AS REQUIRED: REFERENCE CIVIL LANDSCAPE AND IRRIGATION DRAWINGS.
5. ALL WIRING IS SHOWN DIAGRAMMATICALLY ON DRAWINGS, FIELD VERIFY ALL CONDITIONS PRIOR TO ROUGH-IN.
6. ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL CODES.
7. ALL WIRE TO LIGHTING TO BE #4 UNLESS NOTED OTHERWISE.
8. CONDUCTOR COUNT IS SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL ENSURE THAT ANY AND ALL DEVICES AND EQUIPMENT ARE CIRCUITED PROPERLY. CONTRACTOR SHALL ENSURE THAT NO EQUIPMENT OR DEVICES ARE COMBINED OTHER THAN WHAT IS DEPICTED.
9. FIELD VERIFY ALL DIMENSIONS, DO NOT SCALE DRAWINGS.
10. COORDINATE INSTALLATION OF METER AND ELECTRICAL REQUIREMENTS WITH XCEL ENERGY.
11. NEW PEDESTAL MUST MEET ALL XCEL ENERGY REQUIREMENTS I.E. COLD SEQUENCE PADLOCK SLIP LATCH ON METER COVER, HOLD OPEN BAR ON METER HOOD.
12. COORDINATE WIRING TO SUMP PUMPS AND CONTROLLER WITH PROVIDERS PRIOR TO ROUGH-IN.

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JOEL M.
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G ROAD BRIDGE REPLACEMENT
ONE–LINE DIAGRAMS

PANEL: PP1 | OC DEVICE TYPE: Breaker | ENCLOSURE: NEMA 3R | MAINS(A): BKR | CONTINUOUS(A): 100
LOCATION: | DEVICE FAMILY: Bolt On | MOUNTING: Surface | WIRING: Single-Phase 3-Wire | BUS SC RATING(A): 22000
FED FROM: BUS-XFMR | VOLTAGE: 240/120 | FAULT CURRENT(A): 3079
INCIDENT ENERGY: 16.93 Cal/cm2 @18.00(in) | BOUNDARY: 90.55(in)

OC AMPS P	NOTES	DESCRIPTION	DEMAND CODE	VA	CKT	PHASE LOADS VA A	B	C	CKT	VA	DEMAND CODE	DESCRIPTION	NOTES <1>	OC AMPS P
100 2		MAIN	GENERAL	0	1	180			2	180	GENERAL	CONTROL POWER		15 1
"		"		0	3		600		4	600	GENERAL	IRR CNTRL <2>		20 1
20 2		SUMP-1	NONE	438	5	876			6	438	NONE	SUMP-2		20 2
"		"		438	7		876		8	438		"		"
20 1		RCPT FUTURE	RECEPTA	1500	9	2125			10	625	NONE	LTS TUNNEL		20 2
20 1		RCPT FUTURE	RECEPTA	1500	11		2125		12	625		"		"
					13				14					
					15				16					
20 2		LTS 24 RD SE	NONE	816	17	1116			18	300	NONE	LTS NE PATH		20 2
"		"		816	19		1116		20	300		"		"
					21				22					
					23				24					
					25				26					
					27				28					
					29				30					
					31				32					

	KVA	3P AVE AMPS		PHASE TOTALS	VA	AMPS		BUS TOTALS	KVA
ALL CONNECTED			*						
TOTAL CONNECTED	8.70	20.9	*	A-N	4143.1	34.5		CONNECTED	8.70
TOTAL DEMAND	8.70	20.9	*	B-N	4555.1	38.0		DEMAND	8.70
TOTAL DESIGN	8.92	21.5	*	C-N	0.0	0.0		DESIGN	8.92

DATE: Feb 15, 2021
TIME: 10:19:39

FLAG NOTES:

<1> CIRCUITS 1-16 ARE UNSWITCHED, CIRCUITS 17 TO 32 ARE SWITCHED AND CONTROLLED WITH THE CONTRACTOR SUPPLIED PHOTOCELL, TYPICAL.

<2> CORRIDINATE EXACT LOCATION AND WIRING OF IRRIGATION CONTROLLER WITH PROVIDER. PROVIDE 1" SCHEDULE 80 PVC WITH 2- #10 THWN CU + #12 GND TO CONTROLLER.

COLORADO REGISTERED PROFESSIONAL ENGINEER
37580
3-1-21

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DRAWN BY AJM DATE 3-1-2021
DESIGNED BY AJM DATE 3-1-2021
CHECKED BY AJM DATE 3-1-2021
APPROVED BY JC DATE 3-1-2021

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

G ROAD BRIDGE REPLACEMENT
PANEL SCHEDULES