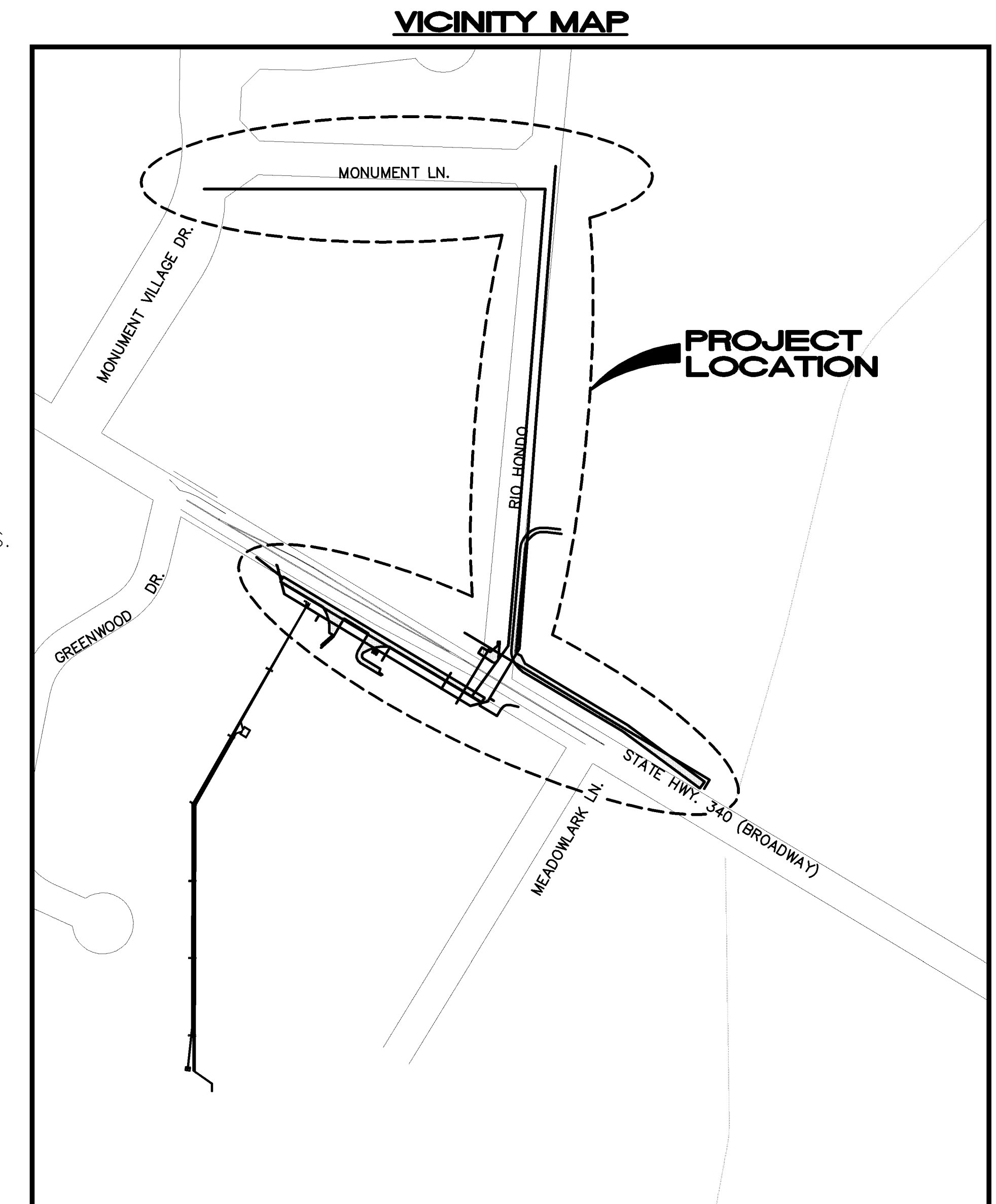


REDLANDS FIRE STATION #5 SEWER, WATER AND STORM EXTENSIONS OCTOBER, 2003

- 1 ————— Cover Sheet
- 2 ————— Standard Abbreviations, Legend, and Symbols
- 3 ————— Summary of Approximate Quantities
- 4 ————— Sanitary Sewer Plan and Profile
- 5 ————— Water Line Plan and Profile
- 6 ————— Storm Sewer Plan and Profile
- 7-8 ————— Water Line and Sanitary Sewer Plan and Profile (Rolland Eng. Sheets 17 and 18)



UTILITIES AND AGENCIES								
AGENCY	NAME	POSITION	ROLE	MAILING ADDRESS	STREET ADDRESS	CITY, STATE	VOICE-WK	FAX
GRAND JUNCTION, CITY OF	MIKE CURTIS	PROJECT ENGINEER	PROJECT ENGINEER	250 N. 5th STREET	250 N. 5th STREET	GRAND JCT., CO 81501	(970) 256-4004	(970) 256-4022
BRESNAN COMMUNICATIONS	CHUCK WIEDMAN	FIELD ENGINEER	CABLE TV	2502 FORESIGHT CIRCLE	2502 FORESIGHT CIRCLE	GRAND JCT., CO 81504	(970) 245-8777	(970) 245-6803
U.S. WEST/QWEST	MARK EHRlich	FIELD ENGINEER	TELEPHONE	2524 BLICHMANN ROAD	2524 BLICHMANN ROAD	GRAND JCT., CO 81504	(970) 244-4916	(970) 240-4349
UTE WATER	ED TOLEN	ENGINEER	WATER	PO BOX 460		GRAND JCT., CO 81502	(970) 242-7491	(970) 242-9189
XCEL	HAROLD BALL	PROJECT PLANNER	GAS, ELECTRIC	2538 BLICHMANN ROAD	2538 BLICHMANN ROAD	GRAND JCT., CO 81504	(970) 244-2626	(970) 244-2661

*Department of Public Works & Utilities
Engineering and Technical Services Divisions
City of Grand Junction, Colorado*

DRAWING STATUS:	
○ PROGRESS	
○ BID SET	
○ FINAL CONSTRUCTION DRAWINGS	
● ASBUILT	
APPROVED FOR CONSTRUCTION	
CITY OF GRAND JUNCTION	DATE
ACCEPTED AS CONSTRUCTED	
CITY OF GRAND JUNCTION	DATE

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
C	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
FL	FLOW LINE
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
HDPPE	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
NRCPP	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
UJ	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
Δ	DELTA ANGLE

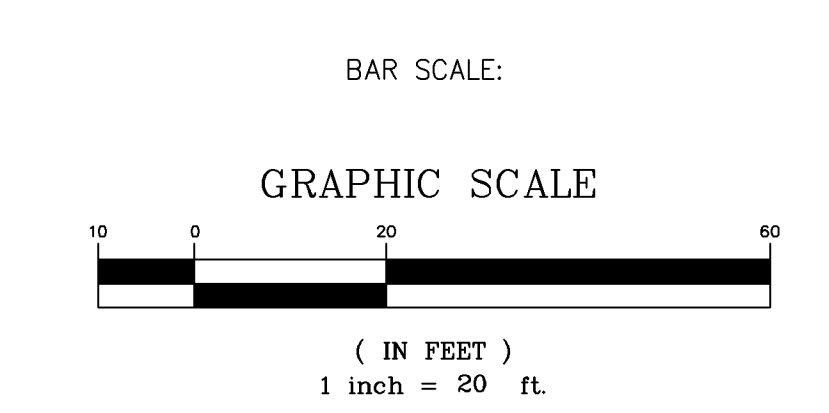
LEGEND

BSWMP	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
DRAINAGE BASIN BOUNDARY	---
BSWMP	ANCHORED STRAW BALES
ASB	ASB
BSWMP	SILT FENCE
SF	SF
BUILDING	[Hatched Box]
CONCRETE CURB AND GUTTER	[Line with 2' CURB AND GUTTER]
CONCRETE CURB, GUTTER, & SIDEWALK	[Line with 7' C, G, & SW]
CONCRETE DITCH	[Line with CONCRETE]
CONCRETE SIDEWALK	[Line with 4' SW]
CULVERT	[Line with 18" RCP]
EARTH DITCH	[Line with EARTH]
EDGE OF GRAVEL	[Dashed Line]
EDGE OF PAVEMENT	[Line with //]
FENCE (BARBED WIRE)	[Line with X's]
FENCE (CHAIN LINK)	[Line with Diamond]
FENCE (IRON)	[Line with Square]
FENCE (PLASTIC)	[Line with Circle]
FENCE (TEMPORARY CONSTRUCTION)	[Line with //]
FENCE (WOOD)	[Line with Dot]
FENCE (WOVEN WIRE)	[Line with //]
GUARD RAIL	[Line with R's]
HATCHING: INDICATES ASPHALT REMOVAL	[Dotted Hatching]
HATCHING: INDICATES CONCRETE REMOVAL	[Diagonal Hatching]
HATCHING: INDICATES STAGING AREA	[Cross-hatched Area]
LINE (CENTER OF IMPROVEMENTS)	[Line with CENTERLINE]
LINE (CITY LIMITS)	[Line with CITY LIMITS]
LINE (CONTROL)	[Line with CONTROL LINE]
LINE (EASEMENT)	[Line with MONUMENT/SECTION LINE]
LINE (MONUMENT/SECTION)	[Line with MONUMENT/SECTION LINE]
LINE (PROPERTY)	[Line with MONUMENT/SECTION LINE]
LINE (RIGHT OF WAY)	[Line with CENTERLINE]
MATCH LINE	MATCH LINE SEE SHEET NO ?
PIPE (IRRIGATION)	[Line with 4" IRR]
PIPE (SIPHON)	[Line with 4" SIPHON]

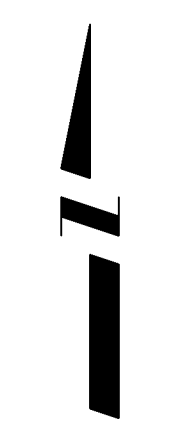
PROPOSED CONCRETE CURB AND GUTTER	[Line with 2' CURB AND GUTTER]
PROPOSED CONCRETE CURB, GUTTER, & SIDEWALK	[Line with 7' C, G, & SW]
PROPOSED CONCRETE SIDEWALK	[Line with 4' SW]
PROPOSED "WET" UTILITIES (CONSTRUCTION NOTE WILL INDICATE TYPE, SIZE, AND MATERIAL OF NEW MAIN)	[Line with 8" PVC SANITARY SEWER]
ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE SHOWN THE SAME AS THEIR EXISTING COUNTERPART, BUT INDICATED BY BOLDER LINETYPE	
RAIL ROAD	[Line with R's]
RETAINING WALL	[Line with 1' RETAINING WALL]
STRIPING (CONTINUOUS WHITE)	[Line with WHITE]
STRIPING (DASHED WHITE)	[Line with WHITE]
STRIPING (CONTINUOUS YELLOW)	[Line with YELLOW]
STRIPING (DASHED YELLOW)	[Line with YELLOW]
TOP OF SLOPE	[Line with 45%]
CONTOUR LINES (SHOWN BETWEEN TOP & TOE)	[Line with 45%]
TOE OF SLOPE	[Line with 45%]
TRAFFIC DETECTOR LOOP	[Line with 45%]
UTILITY LINE (ABANDON) (THIS CASE A WATER LINE)	[Line with (ABANDONED) 8" W]
UTILITY LINE (CABLE TV)	[Line with TV]
UTILITY LINE (ELECTRIC)	[Line with E]
UTILITY LINE (FIBER OPTIC)	[Line with FO]
UTILITY LINE (GAS)	[Line with G]
UTILITY LINE (HIGH VOLTAGE OVERHEAD POWER)	[Line with HVHOP]
UTILITY LINE (OVERHEAD POWER)	[Line with OHP]
UTILITY LINE (OVERHEAD TELEPHONE)	[Line with OHT]
UTILITY LINE (SANITARY SEWER)	[Line with 8" SAN]
UTILITY LINE (SANITARY SEWER FORCE MAIN)	[Line with 8" FM]
UTILITY LINE (SANITARY SEWER SERVICE)	[Line with SS]
UTILITY LINE (STORM SEWER)	[Line with 8" STM]
UTILITY LINE (STORM SEWER, PERFORATED)	[Line with 8" PERF]
UTILITY LINE (STORM/SANITARY SEWER SEWER COMBINATION)	[Line with 18" COMB]
UTILITY LINE (TELEPHONE)	[Line with T]
UTILITY LINE (WATER)	[Line with 8" W]

SYMBOLS

BENCH MARK	[Symbol]
CATCH BASIN	[Symbol]
CLEAN OUT	[Symbol]
CURB STOP	[Symbol]
FIRE HYDRANT	[Symbol]
GUY WIRE ANCHOR	[Symbol]
HEADGATE	[Symbol]
IRRIGATION PUMP	[Symbol]
MAILBOX	[Symbol]
MANHOLE (ELECTRIC)	[Symbol]
MANHOLE (GAS)	[Symbol]
MANHOLE (SANITARY/STORM)	[Symbol]
MANHOLE (TELEPHONE)	[Symbol]
MANHOLE (TV)	[Symbol]
MANHOLE (WATER)	[Symbol]
METER (GAS)	[Symbol]
METER (WATER)	[Symbol]
PEDESTAL (TELEPHONE)	[Symbol]
PEDESTAL (TV)	[Symbol]
PROPERTY PIN	[Symbol]
PULL BOX	[Symbol]
REDUCER FITTING	[Symbol]
SIGN OR POST (SIGN TYPE NOTED)	[Symbol]
SPRINKLER HEAD	[Symbol]
STREET LIGHT	[Symbol]
SURVEY MONUMENT (CITY)	[Symbol]
SURVEY MONUMENT (TYPE NOTED)	[Symbol]
TEST HOLE	[Symbol]
TRAFFIC PAINT MARKING	[Symbol]
TRAFFIC SIGNAL POLE AND MAST ARM	[Symbol]
UTILITY POLE	[Symbol]
VALVE (GAS)	[Symbol]
VALVE (IRRIGATION)	[Symbol]
VALVE (WATER)	[Symbol]
VEGETATION (HEDGE OR BUSH)	[Symbol]
VEGETATION (TREE STUMP)	[Symbol]
VEGETATION (TREE) (CALIPER SIZE NOTED)	[Symbol]
WATER HYDRANT	[Symbol]
WEIR	[Symbol]
YARD LIGHT	[Symbol]



NORTH ARROW:



REVISION	DESCRIPTION	DATE
REVISION Δ		
REVISION Δ		
REVISION Δ		
REVISION Δ		

DRAWN BY	JCS	DATE	4-02
DESIGNED BY		DATE	
CHECKED BY		DATE	
APPROVED BY		DATE	

SCALE	
PLAN	PROFILE
HORIZ. 1"=20'	HORIZ. _____
VERT. _____	VERT. _____



PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION

CITY OF GRAND JUNCTION STANDARD ABBREVIATIONS, LEGEND, AND SYMBOLS SHEET

SANITARY SEWER			
ITEM	REF.	DESCRIPTION	QUANT.
SS-1	202 & 401	Remove and replace asphalt cold patch section; 3-inch thick (min.) HBP Grading SX Superpave, 75 GYR, PG64-22AC, compacted in place	522.45 SY
SS-2	102.11	Furnish and install 48-inch dia. concrete manhole with epoxy coating or "T-lock" liner per Section 102.11 of Standard Contract Documents with ring, cover, cone and invert (standard 5 foot height)	6 EA
SS-3	102.11	Furnish and install 48-inch dia. concrete manhole barrel sections in excess of the standard 5 foot height	36.03 VLF
SS-4	102.9a	Furnish and install 8 inch dia. ASTM D-3034 Type PSM (SDR 35) pipe including pipe bedding and haunching material and pressure testing (use native material if meets City Specifications for backfill) L	1,347.47 LF
SS-5	102.9c & 104.2a	Install sewer pipe by boring & jacking or directional drilling using restrained joint pvc pipe or hdpe (includes all pits)	82 LF
SS-6	102, 103 & 104	Install 4-inch dia. sewer service tap per typical service "y" connection detail	1 EA
SS-7	102.9a	Furnish and install 4 inch dia. ASTM D-3034 Type PSM (SDR) 35 pipe including pipe bedding and haunching material and pressure testing (use native material if meets City Specifications for backfill) L	20 LF
SS-8	102.9	Connect to existing sanitary sewer manhole in Monument Village Drive	1 LS
SS-9	103.15	Granular Stabilization Material for unstable subgrade	480 TON
SS-10	103.16	Earth Backfill Material L	640 TON
SS-11	202, 304 & 401	Remove and replace asphalt road section; 3-inch thick (min.) cold patch asphalt, compacted in place over 6 inches (min.) aggregate base course Class 6	522.45 SY
SS-12	102.11	Install 8-inch temporary plugs in sewer stubs	2 EA

WATER			
ITEM	REF.	DESCRIPTION	QUANT.
W-1	102.7b	Furnish & install 4-inch C900, Class 150 PVC waterline including pipe bedding and haunching material and pressure testing (use native material if meets City Specifications for backfill)	78 LF
W-2	102.7b	Furnish & install 8-inch C900, Class 150 PVC waterline including pipe bedding and haunching material and pressure testing (use native material if meets City Specifications for backfill)	967.71 LF
W-3	102.7b	Furnish & install 8-inch x 8-inch x 8-inch swivel tee with thrust restraint	1 EA
W-4	102.7b	Furnish & install 8-inch x 8-inch x 4-inch swivel tee with thrust restraint	1 EA
W-5	102.7b	Furnish & install 8-inch 45 degree bend with thrust restraint	2 EA
W-6	102.8b	Furnish & install 4-inch gate valve	1 EA
W-7	102.7b	Furnish & install 8-inch 22.5 degree bend with thrust restraint	1 EA
W-8	102.7b	Furnish & install 8-inch x 4-inch reducer	1 EA
W-9	102.7b	Furnish & install solid sleeve to connect to existing 4-inch PVC waterline	2 EA
W-10	102.7c	Extend 3/4-inch water service using Type K copper line from existing water service to new corp. stop	25 LF
W-11	102.7c, d, & f	Bore including all materials, labor, and equipment to install per plans	60 LF
W-12	102.8a	Furnish & install fire hydrant assembly including thrust restraint (includes tee and valve and pipe)	2 EA
W-13	102.8b	Furnish & install 8-inch gate valve	1 EA
W-14	102.8j & k	Furnish & install 3/4-inch tapping saddle & corp. stop	1 EA
W-15	102.8j & k	Furnish & install 1-1/2-inch tapping saddle & corp. stop	1 EA
W-16	102.8j & k	Furnish & install 4-inch tapping saddle & corp. stop for fire line	2 EA
W-17	103.15	Granular stabilization material as directed including overexcavation of trench below bedding level and disposal of excavated material	365 TON
W-18	103.16	Earth Backfill Material L	730 TON
W-19	104.3	Connect to existing 4-inch PVC waterline	2 EA
W-20	102.7b	Furnish & install 4-inch 45 degree bend with thrust restraint	4 EA
W-21	104.3	Install Ute furnished water meter, meter pit & yoke	4 EA
W-22	202	Abandon existing 3-inch PVC waterline including cutting existing main, installing 3-inch plug & thrust restraint, and plugging remaining end with concrete L	1 LS
W-23	202 & 401	Remove and replace asphalt cold patch section; 3-inch thick (min.) HBP Grading SX Superpave, 75 GYR, PG64-22AC, compacted in place	29.44 SY
W-24	102.8j & k	Furnish & install 2-1/2-inch tapping saddle & corp. stop	1 EA
W-25	102.7c	Install 1-1/2-inch water service line using Sch 40 PVC from new corp. stop to new meter vault	8 LF
W-26	102.7c	Install 2-1/2-inch water service line using Sch 40 PVC from new corp. stop to new meter pit	20 LF

STORM SEWER			
ITEM	REF.	DESCRIPTION	QUANT.
SD-1	102.1	18-inch Storm Drain Pipe L	466 LF
SD-2	102.1	18-inch dia. end section	1 EA
SD-3	102.11	Furnish and install 48-inch dia. concrete manhole per Section 102.11 of Standard Contract Documents with ring, cover, cone and invert (standard 5 foot height)	2 EA
SD-4	102.11	Furnish and install 48-inch dia. concrete manhole barrel sections in excess of the standard 5 foot height	4.37 VLF
SD-5	103.15	Granular stabilization material as directed including overexcavation of trench below bedding level and disposal of excavated material	84 TON
SD-6	103.16	Earth Backfill Material L	224 TON
SD-7	104	Connect to existing storm drain inlet L	1 EA
SD-8	202	Remove and dispose of existing 18-inch CMP culverts and backfill excavations with existing material if meets specifications or import material per 103.16	196 LF
SD-9	304	Surface Gravel (3/4-inch Crushed Rock) (1-1/2-inch thick) (including grading)	8.44 SY
SD-8	608	Remove & replace concrete curb, gutter & walk & ramp including 6-inch Class 6 basecourse to match existing	46.78 SY
SD-10	202 & 401	Remove and replace asphalt cold patch section; 3-inch thick (min.) HBP Grading SX Superpave, 75 GYR, PG64-22AC, compacted in place	16 SY
SD-11	202, 304 & 401	Remove and replace asphalt road section; 3-inch thick (min.) cold patch asphalt, compacted in place over 6 inches (min.) aggregate base course Class 6	16 SY
SD-12	103.14	Flowfill storm drain crossing of Hwy 340 per CDOT Section 206.02(a)	51 CY

COMMON ITEMS			
ITEM	REF.	DESCRIPTION	QUANT.
C-1	209	Dust Abatement	57 DAYS
C-2	625	Construction Surveying including as-built	1 LS
C-3	626	Mobilization	1 LS
C-4	630	Traffic Control (Complete In Place)	1 LS
C-5	630	Traffic Control Plan	1 LS
C-6	630	Traffic Control Flaggers	120 HR
FA		Force Account (minor contract revisions)	--- ---

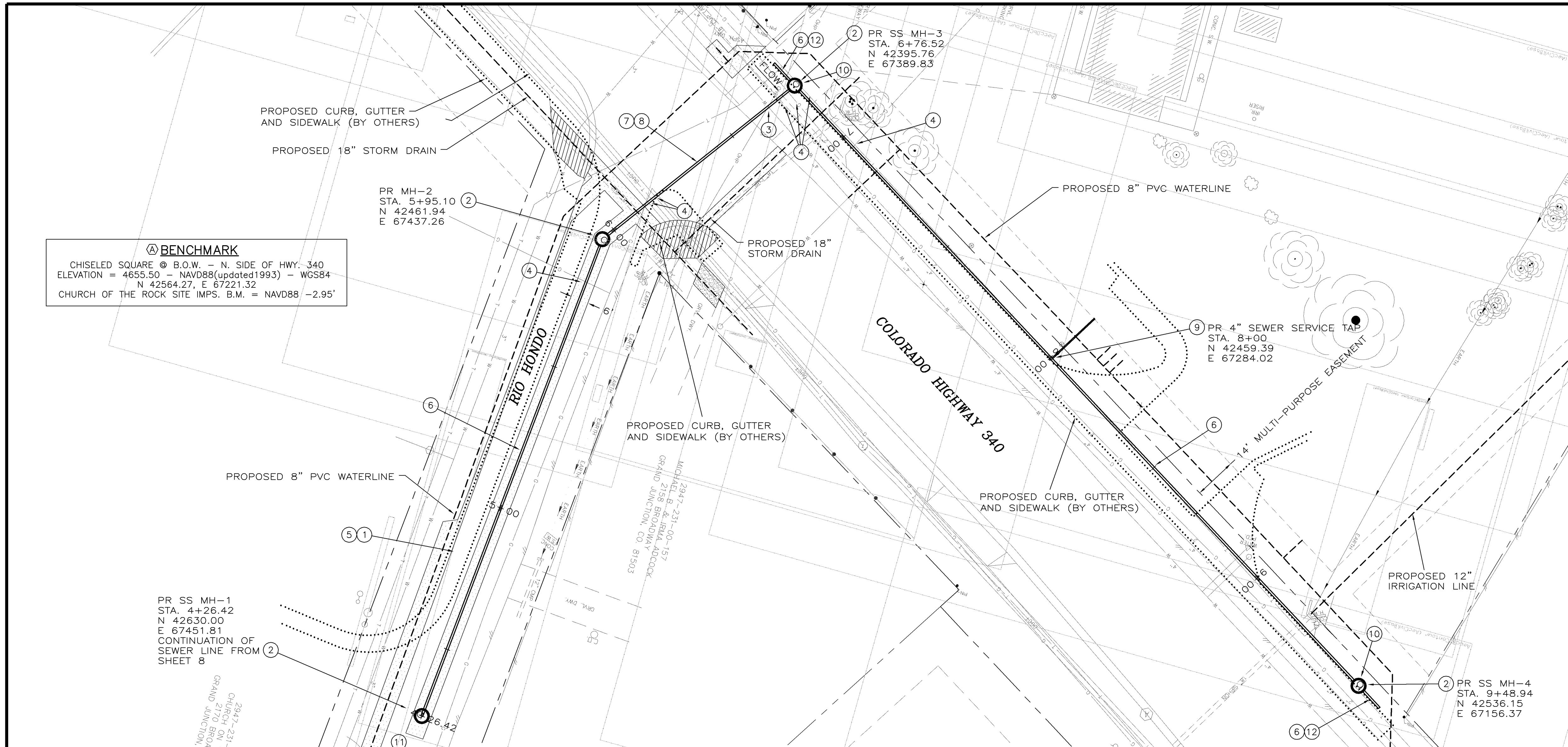
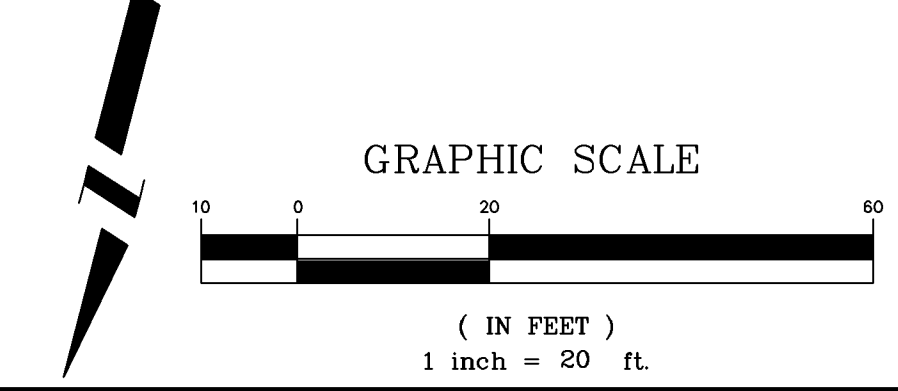
REVISION	DESCRIPTION	DATE
REVISION Δ	_____	_____
REVISION Δ	_____	_____
REVISION Δ	_____	_____
REVISION Δ	_____	_____

DRAWN BY	DPW	DATE	2003
DESIGNED BY	MC	DATE	2003
CHECKED BY	MC	DATE	2003
APPROVED BY	_____	DATE	_____

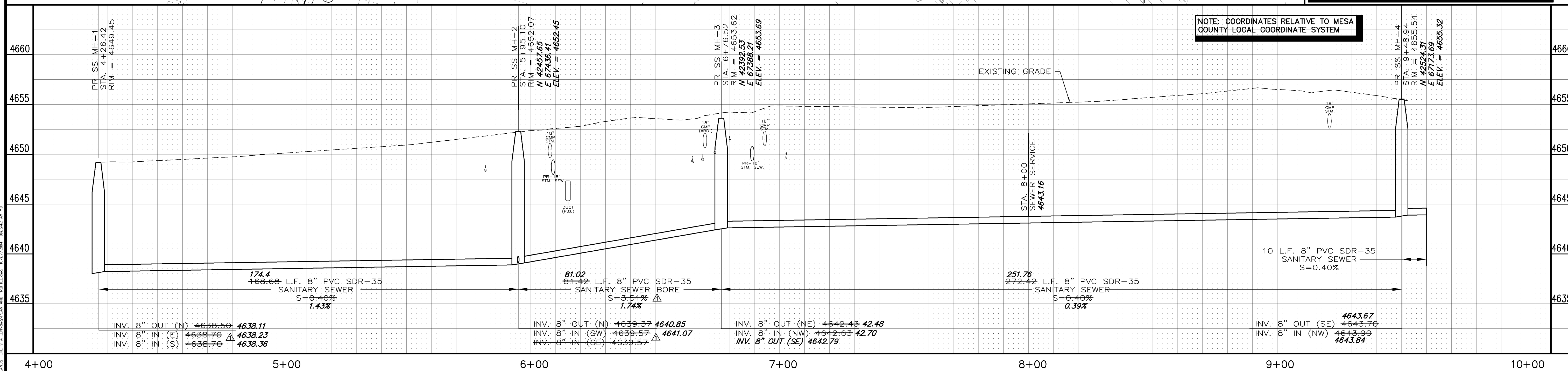
SCALE	
PLAN	PROFILE
HORIZ. _____	HORIZ. _____
_____	VERT. _____

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING AND TECHNICAL SERVICES DIVISIONS
CITY OF GRAND JUNCTION, COLORADO

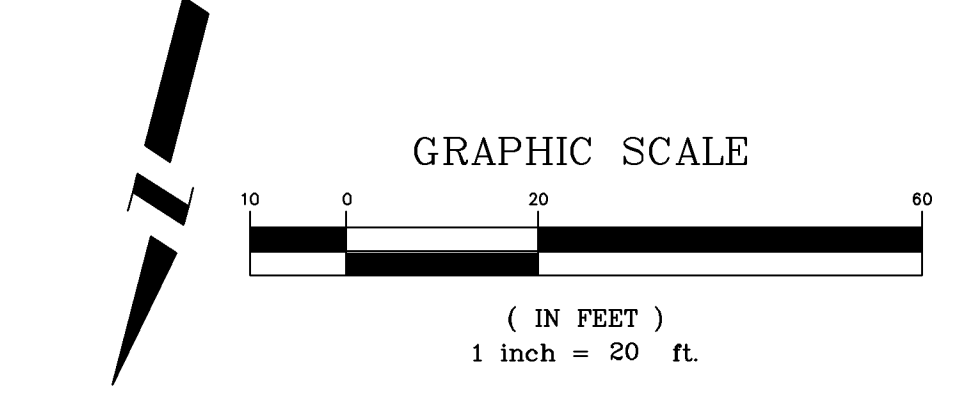
REDLANDS FIRE STATION #5
SUMMARY OF APPROXIMATE QUANTITIES



- CONSTRUCTION NOTES**
- 103.3 - ASPHALT REMOVAL: CUT AND REMOVE PAVEMENT AS SHOWN. GENERALLY WIDTH TO INSTALL MANHOLES WILL BE 12' CENTERED ON THE MANHOLE AND SQUARED OFF AS SHOWN. FOR MAIN LINE REMOVAL WIDTH WILL BE 6' MINIMUM AND 8' MAXIMUM CENTERED ON THE PIPE.
 - 102.11 - 48" DIA. SANITARY SEWER MANHOLE (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
 - NOTIFY UTE WATER 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE WATER LINES.
 - NOTIFY XCEL ENERGY, QWEST COMMUNICATIONS AND BRESNAN COMMUNICATIONS 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE GAS OR ELECTRIC (XCEL), TELEPHONE LINES (QWEST) AND/OR CABLE TV LINES (BRESNAN). TELEPHONE LINE WILL BE RELOCATED BY QWEST PRIOR TO CONSTRUCTION OF SEWER LINE.
 - 103.18 - PAVEMENT REPLACEMENT:
304.00 - CDOT CLASS-6 AGGREGATE BASE COURSE. SAME THICKNESS AS EXISTING (6" MIN.). COMPACTED TO 95% AASHTO T-180.
401.00 - HOT BITUMINOUS PAVEMENT (GRADING SX) MATCH EXISTING THICKNESS (3" MIN.). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL GU-03).
 - 102.9A - 8" GRAVITY SEWER PIPE (SDR-35 PVC). BACKFILL TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
 - 102.9C - CARRIER/CASING SEWER PIPE FOR BORE SHALL BE "CERTANTEED CERTA-LOG YELOMINE RESTRAINED JOINT PVC PIPE (CLASS-160, SDR-26) OR HDPE (CLASS-160) (SDR-11).
 - 104.2A - INSTALL SEWER PIPE BY BORING AND JACKING OR DIRECTIONAL DRILLING PER SPECIAL PROVISIONS.
 - 102/103/104 - INSTALL NEW 4" SEWER SERVICE TAP TO MULTI-PURPOSE EASEMENT LINE (SEE CITY OF GRAND JUNCTION TYPICAL SERVICE "Y" CONNECTION).
 - PLACE SHORT SIDE OF ECCENTRIC MANHOLE CONE OPPOSITE OF PROPOSED BACK OF WALK (AZ:211').
 - SEE SHEETS 17 AND 18 OF CHURCH ON THE ROCK SITE IMPROVEMENTS FOR SANITARY SEWER PLAN AND PROFILE (SHEETS 7 AND 8 OF THIS SET).
 - INSTALL 10' LONG, 8" PVC STUB @ 0.40%. INSTALL TEMPORARY PLUG.
- GRADES AND COORDINATES WERE OBSERVED UNDER MY DIRECT SUPERVISION AND CHECKING ON AUGUST 23, 2004. RICHARD A. MASON PLS 18469

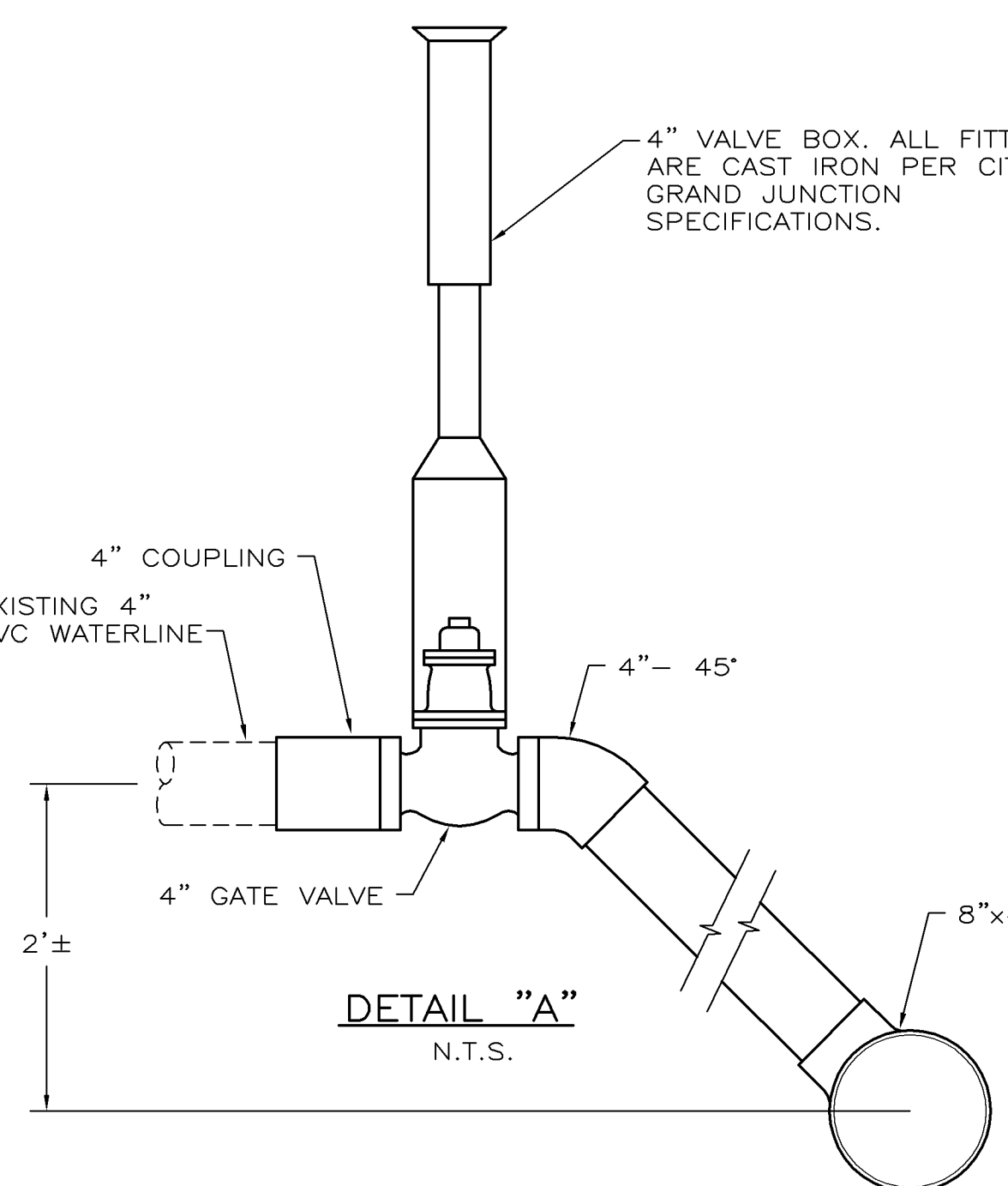
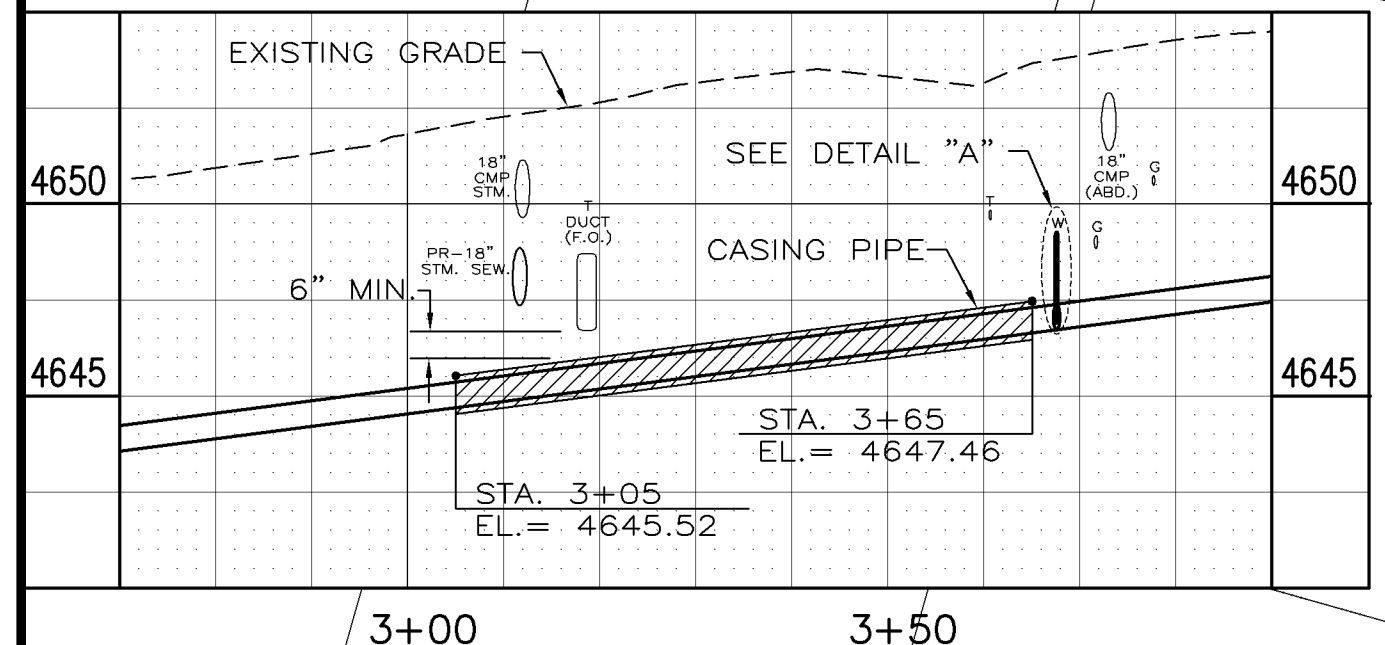
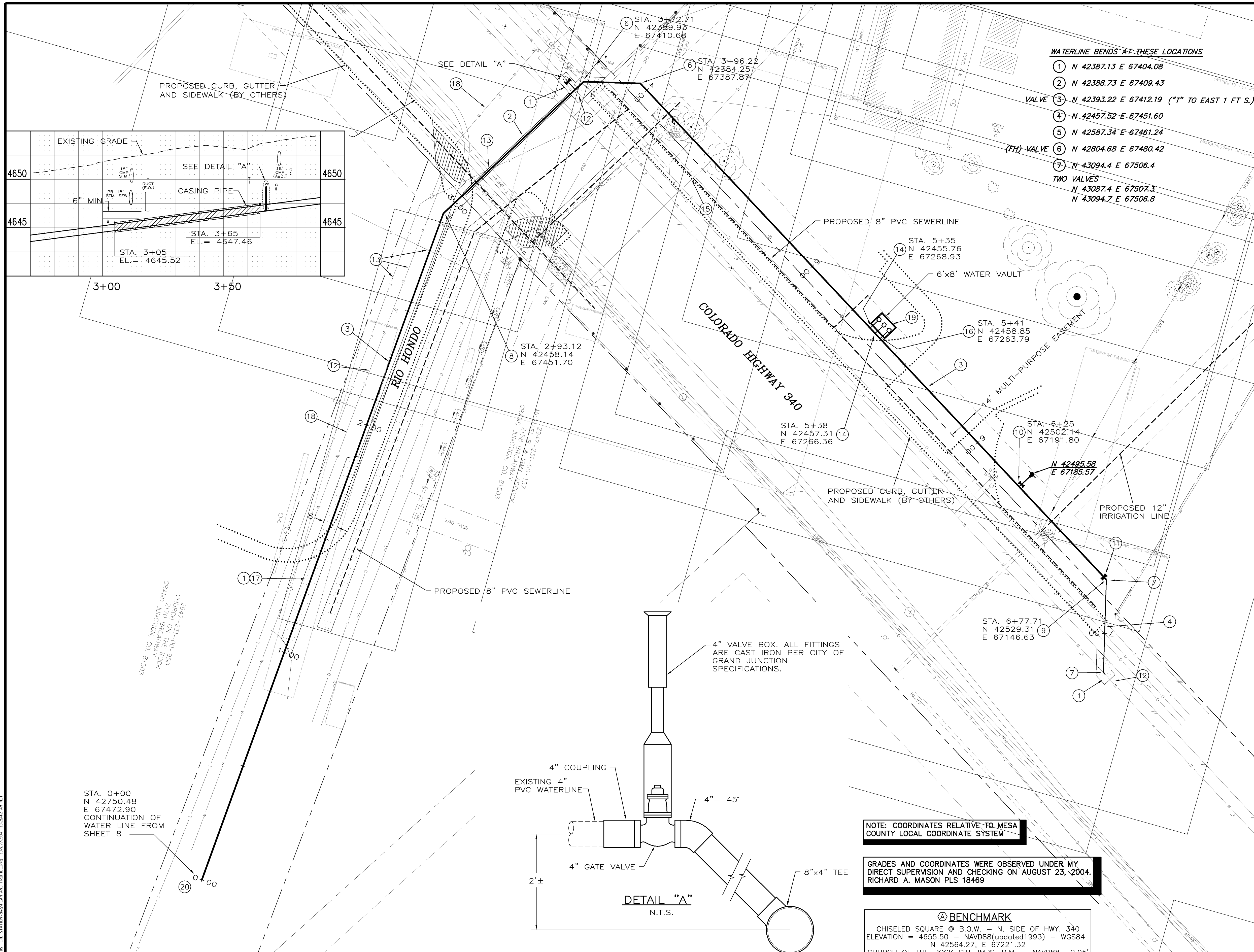


<table border="1"> <tr> <th>REVISION</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> <tr> <td>△</td> <td>INVERT REVISIONS</td> <td>-12-18-03</td> </tr> <tr> <td>△</td> <td></td> <td></td> </tr> <tr> <td>△</td> <td></td> <td></td> </tr> <tr> <td>△</td> <td></td> <td></td> </tr> </table>	REVISION	DESCRIPTION	DATE	△	INVERT REVISIONS	-12-18-03	△			△			△			<table border="1"> <tr> <th>DESCRIPTION</th> <th>DATE</th> </tr> <tr> <td>DESIGNED BY</td> <td>DPW DATE 2003</td> </tr> <tr> <td>CHECKED BY</td> <td>MC DATE 2003</td> </tr> <tr> <td>APPROVED BY</td> <td>DATE</td> </tr> </table>	DESCRIPTION	DATE	DESIGNED BY	DPW DATE 2003	CHECKED BY	MC DATE 2003	APPROVED BY	DATE	<table border="1"> <tr> <th>SCALE</th> </tr> <tr> <td>PLAN 1"=20'</td> </tr> <tr> <td>PROFILE 1"=5'</td> </tr> </table>	SCALE	PLAN 1"=20'	PROFILE 1"=5'	<p>DEPARTMENT OF PUBLIC WORKS AND UTILITIES ENGINEERING AND TECHNICAL SERVICES DIVISIONS CITY OF GRAND JUNCTION, COLORADO</p>	<p>REDLANDS FIRE STATION #5 8 INCH SANITARY SEWER EXTENSION FROM CHURCH ON THE ROCK</p>	<p>4</p>
REVISION	DESCRIPTION	DATE																													
△	INVERT REVISIONS	-12-18-03																													
△																															
△																															
△																															
DESCRIPTION	DATE																														
DESIGNED BY	DPW DATE 2003																														
CHECKED BY	MC DATE 2003																														
APPROVED BY	DATE																														
SCALE																															
PLAN 1"=20'																															
PROFILE 1"=5'																															



CONSTRUCTION NOTES

- 1 202 - REMOVE EXISTING ASPHALT. CUT ASPHALT IN A STRAIGHT LINE 3' EITHER SIDE OF THE WATER MAIN ALIGNMENT AS REQUIRED FOR CONSTRUCTION UNLESS OTHERWISE SHOWN.
- 2 102.7d/102.7e/102.7f - INSTALL 60 L.F. 8" CERTA-LOK C-900/RJ, CLASS-200, RESTRAINED JOINT PVC WATERLINE (CARRIER PIPE) WITH CERTA-LOK C-900/RJ COUPLINGS OR ENGINEER APPROVED EQUAL JOINT RESTRAINING SYSTEM (STA 3+05 TO STA. 3+65). WATERLINE MUST BE TESTED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS OF THE CITY OF GRAND JUNCTION AND APPROVED BEFORE BACKFILLING EXCAVATIONS. 14" DIA. MINIMUM SMOOTH STEEL PIPE, 0.281" MINIMUM WALL THICKNESS. MINIMUM YIELD STRENGTH 35,000 PSI (CASING PIPE) (STA 3+05 TO STA. 3+65). SECTIONS OF PIPE SHALL BE JOINED BY A CONTINUOUS WELD AROUND THE CIRCUMFERENCE OF THE PIPE. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE JOINTS CAPABLE OF RESISTING BORING AND JACKING FORCES WITHOUT FAILURE. CASING END SHALL BE NON-SHRINK GROUT MORTAR SEALED. PIPE CASING SPACERS SHALL BE CALPICO MODEL PX CASING INSULATORS WITH (4) SKIDS PER BAND OR ENGINEER APPROVED EQUAL. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION (REFER TO GU-06 AND GU-07 OF THE STANDARD CONTRACT DOCUMENTS). MINIMUM CASING DEPTH SHALL BE 54" AS SHOWN ON PLANS. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES AND ADJUST INSTALLATION DEPTH TO MAINTAIN 54" OF BURY AND 6" SEPARATION FROM OTHER UTILITIES.
- 3 102.7b - INSTALL 8" C-900, CLASS-150, PVC WATERLINE AT LOCATION SHOWN. MINIMUM DEPTH OF INSTALLATION SHALL BE 54". CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES AND ADJUST INSTALLATION DEPTH TO MAINTAIN 54" OF BURY AND 18" SEPARATION FROM OTHER UTILITIES UNLESS OTHERWISE NOTED, AND KEEP EXISTING WATERLINE IN SERVICE UNTIL ABANDONED WHERE NOTED.
- 4 102.7b - INSTALL 4" C-900, CLASS-150, PVC WATERLINE AT LOCATION SHOWN. MINIMUM DEPTH OF INSTALLATION SHALL BE 54". CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES AND ADJUST INSTALLATION DEPTH TO MAINTAIN 54" OF BURY AND 18" SEPARATION FROM OTHER UTILITIES UNLESS OTHERWISE NOTED, AND KEEP EXISTING WATERLINE IN SERVICE UNTIL ABANDONED WHERE NOTED.
- 5 102.7b - INSTALL AN 8"x8"x4" SWIVEL TEE AND THRUST RESTRAINT (REFER TO W-07 OF THE STANDARD CONTRACT DOCUMENTS).
- 6 102.7b - INSTALL A 8" 45° BEND AND THRUST RESTRAINT (REFER TO W-07 OF THE STANDARD CONTRACT DOCUMENTS).
- 7 102.7b - INSTALL A 4" 45° BEND AND THRUST RESTRAINT (REFER TO W-07 OF THE STANDARD CONTRACT DOCUMENTS).
- 8 102.7b - INSTALL A 8" 22.5° BEND AND THRUST RESTRAINT (REFER TO W-07 OF THE STANDARD CONTRACT DOCUMENTS).
- 9 102.7b - INSTALL 8"x4" REDUCER.
- 10 102.8a - INSTALL FIRE HYDRANT (REFER TO W-09 OF THE STANDARD CONTRACT DOCUMENTS).
- 11 102.8b - INSTALL 4" OR 8" GATE VALVE (REFER TO W-07 OF THE STANDARD CONTRACT DOCUMENTS).
- 12 NOTIFY UTE WATER 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE WATER LINES.
- 13 NOTIFY XCEL ENERGY, QWEST COMMUNICATIONS AND BRESNAN COMMUNICATIONS 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE GAS OF ELECTRIC (XCEL), TELEPHONE LINES (QWEST) AND/OR CABLE TV LINES (BRESNAN).
- 14 102.7c - INSTALL 1 1/2" DIA. WATER SERVICE, TAP AND WATER METER.
- 15 102.7c - INSTALL 3/4" DIA. WATER SERVICE.
- 16 102.7c - INSTALL 4" DIA. FIRE LINE.
- 17 103.18 - PAVEMENT REPLACEMENT:
304.00 - CDOT CLASS-6 AGGREGATE BASE COURSE. SAME THICKNESS AS EXISTING (6" MIN.). COMPACTED TO 95% ASHTO T-180
401.00 - HOT BITUMINOUS PAVEMENT (GRADING SX) MATCH EXISTING THICKNESS (3" MIN.). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL GU-03).
- 18 ABANDON EXISTING 3" UTE WATERLINE AFTER 8" PVC WATERLINE IS INSTALLED.
- 19 102.8h - INSTALL 6'x8' VAULT. VAULT TO BE LOCATED 6" INSIDE 14' MULTI-PURPOSE EASEMENT.
- 20 SEE SHEET 18 OF CHURCH ON THE ROCK SITE IMPROVEMENTS FOR WATER PLAN (SHEET 8 OF THIS SET).



NOTE: COORDINATES RELATIVE TO MESA COUNTY LOCAL COORDINATE SYSTEM

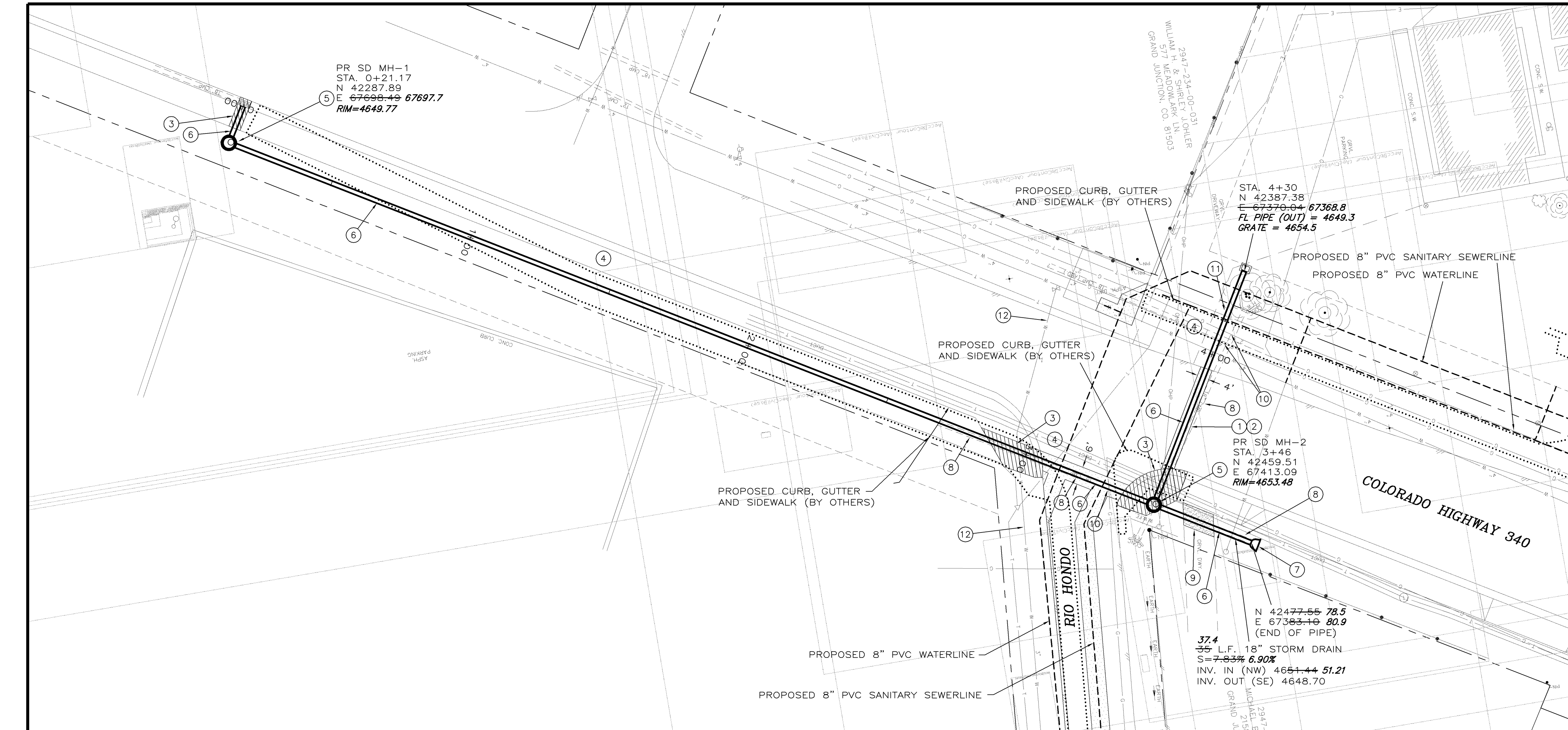
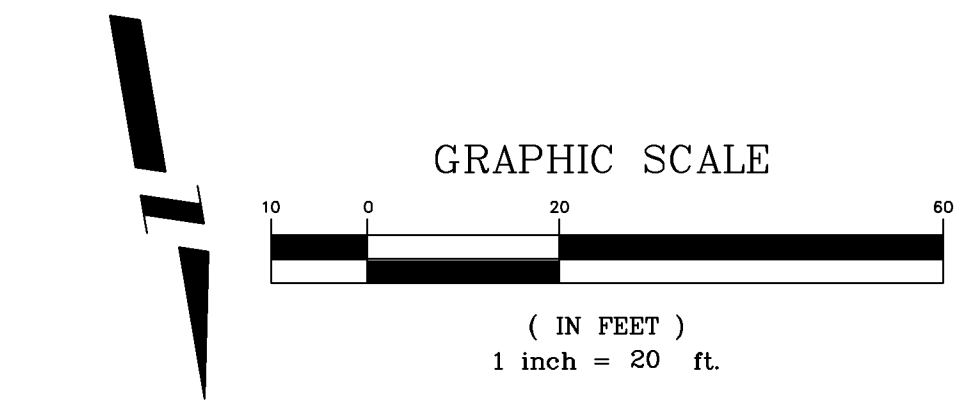
GRADES AND COORDINATES WERE OBSERVED UNDER MY DIRECT SUPERVISION AND CHECKING ON AUGUST 23, 2004. RICHARD A. MASON PLS 18469

BENCHMARK
CHISELED SQUARE @ B.O.W. - N. SIDE OF HWY. 340
ELEVATION = 4655.50 - NAVD88(updated1993) - WGS84
N 42564.27, E 67221.32
CHURCH OF THE ROCK SITE IMPS. B.M. = NAVD88 -2.95'

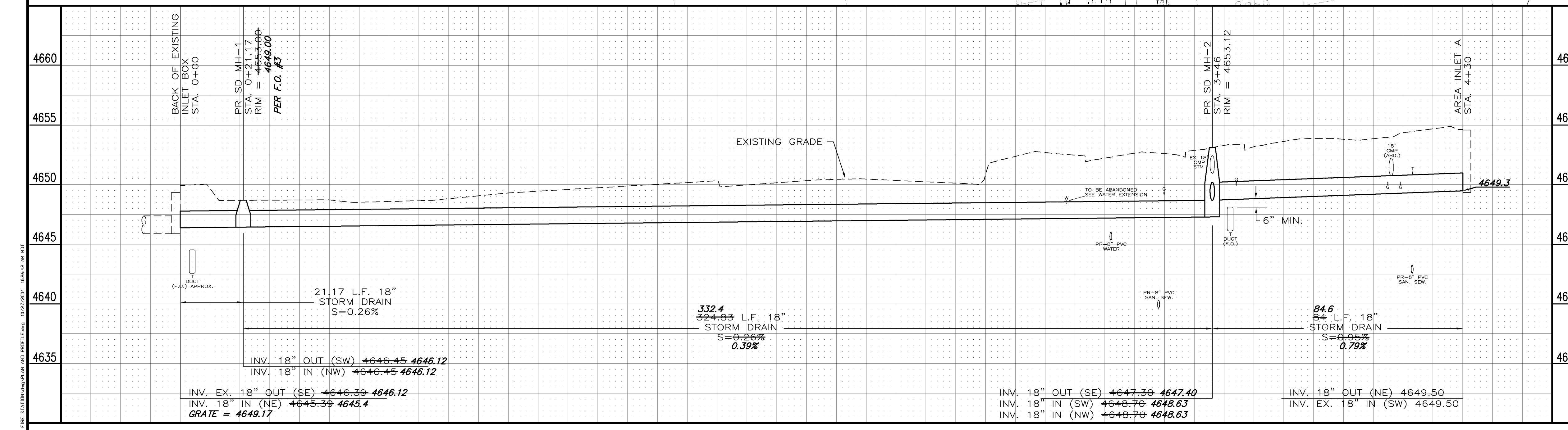
REVISION	DESCRIPTION	DATE	DRAWN BY	DPW	DATE	2003	SCALE
REVISION			DESIGNED BY	MC	DATE	2003	PLAN PROFILE
REVISION			CHECKED BY	MC	DATE	2003	HORIZ. 1"=20' HORIZ.
REVISION			APPROVED BY		DATE		VERT.

**DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING AND TECHNICAL SERVICES DIVISIONS
CITY OF GRAND JUNCTION, COLORADO**

**REDLANDS FIRE STATION #5
8 INCH WATER EXTENSION
FROM CHURCH ON THE ROCK**



- CONSTRUCTION NOTES**
- 202 - ASPHALT REMOVAL: CUT AND REMOVE PAVEMENT AS SHOWN. GENERALLY WIDTH TO INSTALL MANHOLES WILL BE 12' CENTERED ON THE MANHOLE AND SQUARED OFF AS SHOWN. FOR MAIN LINE REMOVAL WIDTH WILL BE 4' CENTERED ON THE PIPE.
 - 103.18 - PAVEMENT REPLACEMENT:
304.00 - CDOT CLASS-6 AGGREGATE BASE COURSE. SAME THICKNESS AS EXISTING (6" MIN.). COMPACTED TO 95% AASHTO T-180.
401.00 - HOT BITUMINOUS PAVEMENT (GRADING SX) MATCH EXISTING THICKNESS (3" MIN.). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL GU-03).
 - 202 - CONCRETE REMOVAL: SAWCUT AS NECESSARY. REMOVE ENTIRE CONCRETE RAMP AS SHOWN. GENERAL WIDTH TO INSTALL MANHOLES WILL BE 12' CENTERED ON THE MANHOLE.
 - 608 - CONCRETE REPLACEMENT: REPLACE CURB, GUTTER, SIDEWALK OR RAMP AS NECESSARY.
 - NOTIFY XCEL ENERGY, QWEST COMMUNICATIONS AND BRESNAN COMMUNICATIONS 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE GAS OR ELECTRIC (XCEL), TELEPHONE LINES (QWEST) AND/OR CABLE TV LINES (BRESNAN).
 - 102.10 - 48" DIA. STORM DRAIN MANHOLE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-03).
 - 102.10 - 18" DIA. STORM DRAIN PIPE. BACKFILL TRENCH WITH NATIVE MATERIALS MEETING CITY SPECIFICATION 103.16.
 - 102.10 - 18" DIA. END SECTION.
 - 202 - REMOVE 18" CMP CULVERT.
 - 304 - REGRADE GRAVEL DRIVEWAY W/ 3/4" CRUSHED ROCK (1 1/2" MIN. THICKNESS).
 - GAS LINE TO BE RELOCATED BY XCEL ENERGY.
 - TELEPHONE LINE TO BE RELOCATED BY QWEST COMMUNICATIONS.
 - 3" UTE WATER LINE TO BE ABANDONED AFTER NEW 8" PVC WATERLINE IS IN SERVICE.



NOTE: COORDINATES RELATIVE TO MESA COUNTY LOCAL COORDINATE SYSTEM

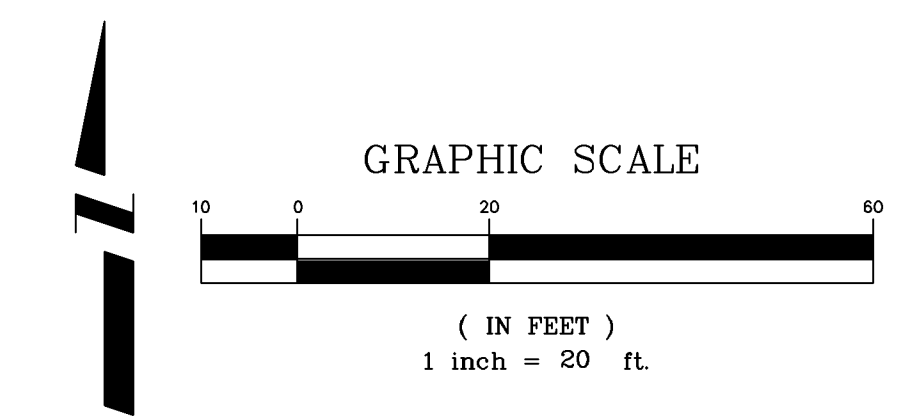
GRADES AND COORDINATES WERE OBSERVED UNDER MY DIRECT SUPERVISION AND CHECKING ON AUGUST 23, 2004. RICHARD A. MASON PLS 18469

BENCHMARK
CHISELED SQUARE @ B.O.W. - N. SIDE OF HWY. 340
ELEVATION = 4655.50 - NAVD88(updated1993) - WGS84
N 42564.27, E 67221.32
CHURCH OF THE ROCK SITE IMPS. B.M. = NAVD88 -2.95'

REVISION	DESCRIPTION	DATE	DRAWN BY	DPW	DATE	2003
REVISION			DESIGNED BY	MC	DATE	2003
REVISION			CHECKED BY	MC	DATE	2003
REVISION			APPROVED BY		DATE	

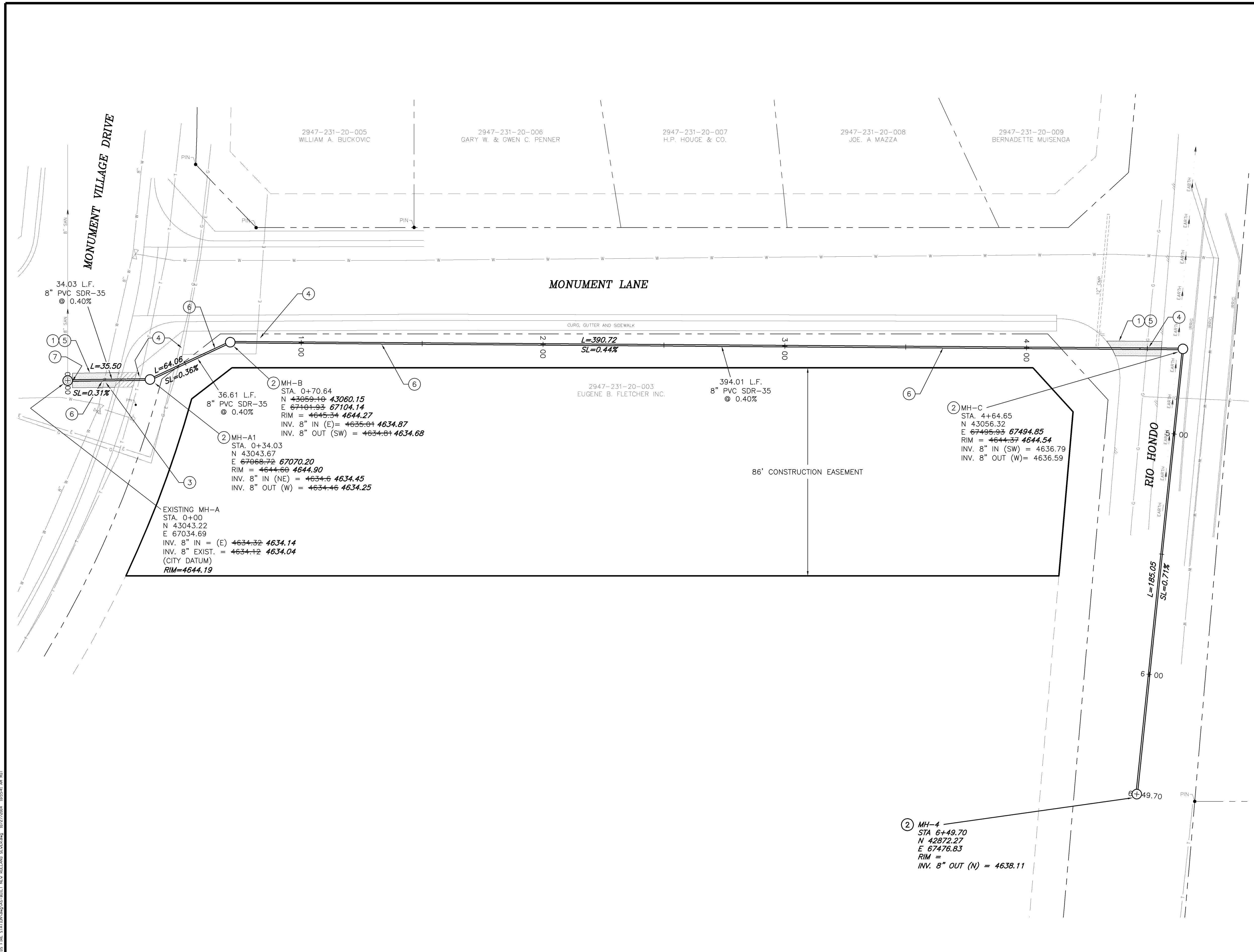
DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING AND TECHNICAL SERVICES DIVISIONS
CITY OF GRAND JUNCTION, COLORADO

REDLANDS FIRE STATION #5
18 INCH STORM SEWER COMBINED WITH
CHURCH ON THE ROCK STORM SEWER



CONSTRUCTION NOTES

- ① 103.3 - ASPHALT REMOVAL: CUT AND REMOVE PAVEMENT AS SHOWN. WIDTH WILL BE 6' MINIMUM AND 8' MAXIMUM CENTERED ON THE PIPE.
- ② 102.11 - 48" DIA. SANITARY SEWER MANHOLE (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- ③ NOTIFY UTE WATER 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE WATER LINES.
- ④ NOTIFY XCEL ENERGY, QWEST COMMUNICATIONS AND BRESNAN COMMUNICATIONS 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE GAS OR ELECTRIC (XCEL), TELEPHONE LINES (QWEST) AND/OR CABLE TV LINES (BRESNAN). TELEPHONE LINE WILL BE RELOCATED BY QWEST PRIOR TO CONSTRUCTION OF SEWER LINE.
- ⑤ 103.18 - PAVEMENT REPLACEMENT:
304.00 - CDOT CLASS-6 AGGREGATE BASE COURSE. SAME THICKNESS AS EXISTING (6" MIN.), COMPACTED TO 95% AASHTO T-180.
401.00 - HOT BITUMINOUS PAVEMENT (GRADING SX) MATCH EXISTING THICKNESS (3" MIN.). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL GU-03).
- ⑥ 102.9A - 8" GRAVITY SEWER PIPE (SDR-35 PVC). BACKFILL TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- ⑦ 104 - CONNECT 8" GRAVITY SEWER PIPE (SDR-35) TO EXISTING MANHOLE (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08).



NOTE: COORDINATES RELATIVE TO MESA COUNTY LOCAL COORDINATE SYSTEM

GRADES AND COORDINATES WERE OBSERVED UNDER MY DIRECT SUPERVISION AND CHECKING ON AUGUST 23, 2004. RICHARD A. MASON PLS 18469

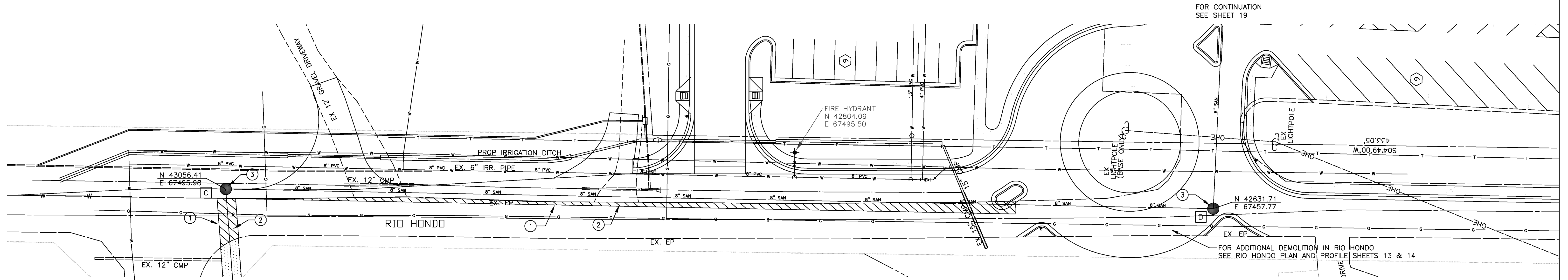
Ⓐ BENCHMARK

CHISELED SQUARE @ B.O.W. - N. SIDE OF HWY. 340
 ELEVATION = 4655.50 - NAVD88(updated1993) - WGS84
 N 42564.27, E 67221.32
 CHURCH OF THE ROCK SITE IMPS. B.M. = NAVD88 -2.95'

REVISION	DESCRIPTION	DATE	DRAWN BY	DPW	DATE	2003	SCALE
REVISION			DESIGNED BY	MC	DATE	2003	PLAN PROFILE
REVISION			CHECKED BY	MC	DATE	2003	HORIZ. 1"=20' HORIZ. VERT.
REVISION			APPROVED BY		DATE		

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
 ENGINEERING AND TECHNICAL SERVICES DIVISIONS
 CITY OF GRAND JUNCTION, COLORADO

REDLANDS FIRE STATION #5
 8 INCH SANITARY SEWER EXTENSION
 MONUMENT DRIVE



FOR CONTINUATION
SEE SHEET 19

FOR CONTINUATION
SEE SHEET 17

FOR ADDITIONAL DEMOLITION IN RIO HONDO
SEE RIO HONDO PLAN AND PROFILE SHEETS 13 & 14

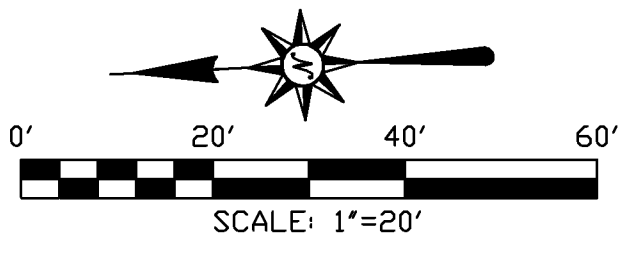
FIRE HYDRANT
N 42804.09
E 67495.50

UTILITY PROVIDERS

- | | |
|----------------|----------------------|
| DOMESTIC WATER | UTE WATER |
| SANITARY SEWER | ??? |
| ELECTRIC | EXCEL ENERGY |
| GAS | EXCEL ENERGY |
| TELEPHONE | QWEST COMMUNICATIONS |
| CABLE TV | AT&T CABLE |

CONSTRUCTION NOTES

- ① WHEEL CUT OR JACK HAMMER EXISTING ASPHALT TO A NEAT LINE 4 FEET FROM CENTER LINE OF PIPE. RECONSTRUCT PAVEMENT TO MATCH EXISTING SECTION AFTER PIPE INSTALLATION.
- ② REMOVE AND DISPOSE OF EXISTING ASPHALT. CONTRACTOR IS RESPONSIBLE FOR PROPERLY DISPOSING OF OLD ASPHALT.
- ③ CONSTRUCT NEW SANITARY SEWER MANHOLE IN ACCORDANCE WITH CITY OF GRAND JUNCTION DRAWINGS AND SPECIFICATIONS.



NOTE: COORDINATES RELATIVE TO MESA COUNTY LOCAL COORDINATE SYSTEM

GRADES AND COORDINATES WERE OBSERVED UNDER MY DIRECT SUPERVISION AND CHECKING ON AUGUST 23, 2004. RICHARD A. MASON PLS 18469

- LEGEND**
- ===== EXISTING STORM SEWER
 - ===== PROPOSED STORM SEWER
 - W — W — EXISTING WATER LINE
 - W — W — PROPOSED WATER LINE
 - G — G — EXISTING GAS LINE
 - G — G — PROPOSED GAS LINE
 - T — T — EXISTING TELEPHONE LINE
 - T — T — PROPOSED TELEPHONE LINE
 - S — S — EXISTING SANITARY SEWER
 - S — S — PROPOSED SANITARY SEWER
 - ===== EXISTING CURB AND GUTTER
 - ===== PROPOSED CATCH CURB AND GUTTER
 - ===== PROPOSED SPILL CURB AND GUTTER
 - ===== PROPOSED CURB TRANSITION

ACCEPTED FOR CONSTRUCTION

ACCEPTED AS CONSTRUCTED

CITY DEVELOPMENT ENGINEER

CITY DEVELOPMENT ENGINEER

DATE

DATE

CITY UTILITY ENGINEER

CITY UTILITY ENGINEER

DATE

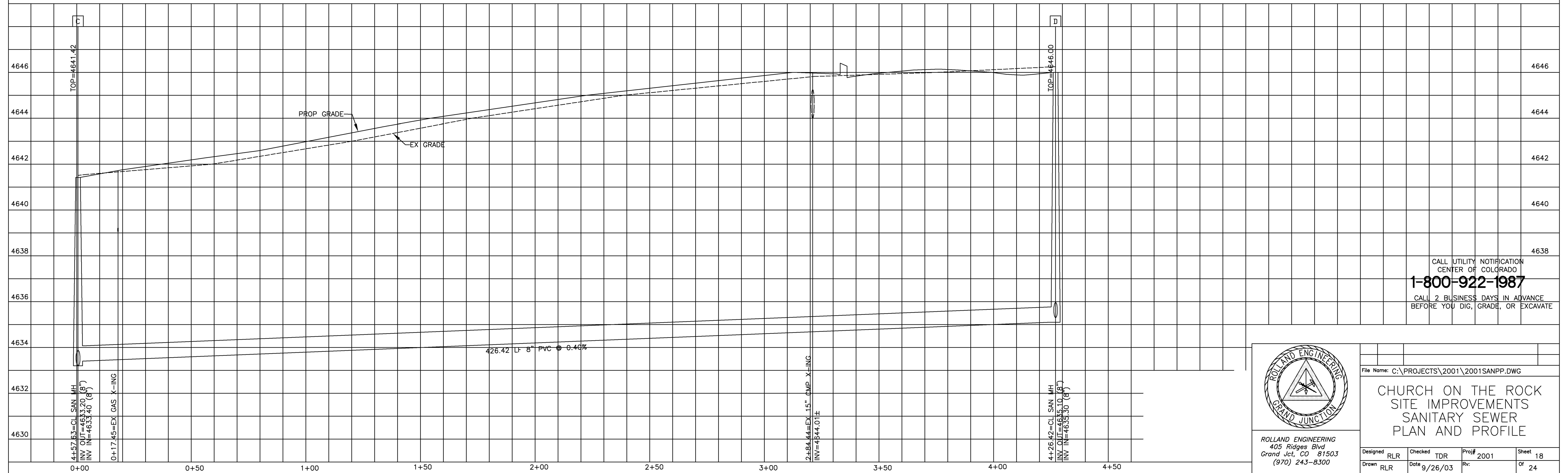
DATE

UTE WATER

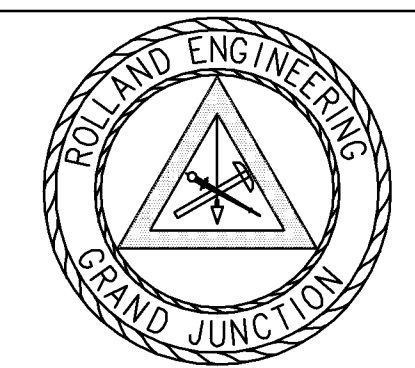
UTE WATER

DATE

DATE



CALL UTILITY NOTIFICATION
CENTER OF COLORADO
1-800-922-1987
CALL 2 BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE, OR EXCAVATE



ROLLAND ENGINEERING
405 Ridges Blvd
Grand Jct, CO 81503
(970) 243-8300

File Name: C:\PROJECTS\2001\2001SANPP.DWG

**CHURCH ON THE ROCK
SITE IMPROVEMENTS
SANITARY SEWER
PLAN AND PROFILE**

Designed RLR	Checked TDR	Proj# 2001	Sheet 18
Drawn RLR	Date 9/26/03	Rv:	Of 24